NEW REMEDIES.

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MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

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EDITORIAL.

IT will please many of our readers to know that the firm of Hegeman & Co., whose failure we noticed in January, have again resumed their business. Mr. Geo. B. Marcher, who for twenty years had charge of the wholesale and manufacturing business of the establishment, has been associated with the concern, and the business will again be carried on as before, at 203 Broadway. It will be remembered that, at the time of the suspension, the illness of Mr. Hegeman and his enforced absence during a critical period in business affairs, had quite as much to do with the suspension, as financial weakness.

WE have had numerous solicitations from advertisers in NEW REMEDIES to give their goods editorial notices in the body of our journal, and it is often alleged that other journals published in the interests of pharmacists and physicians are constantly in the habit of giving such "puffs" to their advertising patrons as a regular matter of business.

From the outset we have declined to resort to this course, and our reasons are, briefly, as follows: We consider that the amount paid for the insertion of an advertisement in its proper place is fully balanced by the circulation which is given to it, and the pains taken to bring it to notice; by the system of indexing (which we were the first to adopt), displayed type, arrangement of matter, etc. It would be unfair to favor one advertiser with editorial puffs and not others; yet, if the fact that an establishment advertises is to be an argument for such notices, every one would have a similar right, and it also follows that the advertiser would be entitled to dictate, in some degree, the nature of the comments to be made. It is easy to understand that in this case any value such an "editorial notice" might have, would be utterly destroyed. Furthermore, it is equivalent to demanding, as a gift, space in the body of the journal which has already been sold to the subscribers.

The thirty-two inside pages (and the Prices Current which are given with them), are intended solely for the benefit of our subscribers, and the choice of matter will be with that understanding and subject to their desires so far as we are able to fulfil them.

Whenever any person, *whether an advertiser or not*, possessed of any new article or process he is desirous of having noticed on its intrinsic merits, will afford to the Editors advantages for becoming familiar with it, similar to those which they possess in the case of books and pamphlets, such comments as the occasion, available space, and general interest of the subject may seem to justify, will be made.

Preference will, of course, be given to such things as are most novel or most likely to concern subscribers, and the proprietor is quite welcome to any advantage he can gain from such a notice.

WE await with considerable interest the results of the experiments in tea-culture which are being carried on at Washington by the Government, under the direction of Mr. Le Duc, and the publication of the report by General A. C. Jones, of the department of Agriculture, on the feasibility of olive-culture in our Southern States. Regarding the former, a prominent dealer in teas, who has had a personal and practical experience of tea-culture in Japan, says, after seeing the 100,000 tea plants in the government propagating houses, that he has the utmost confidence in the success of the attempt. The *Tribune* says:

"The cost of labor in this country has always appeared to be the insurmountable obstacle, but this gentleman says that it should be borne in mind that a Chinaman, accustomed to the preparation of green tea, knows little or nothing as to the methods used with black teas; and the accounts we get, in a general way, from China, seldom distinctly state what kind of tea they are describing. Hence, much confusion and apparent contradiction arise, while the multiplicity of details is calculated to discourage the novice. The gentleman referred to says he knows from experience how jealous the Orientals have always been of their "secrets of trade," and with what an air of mystery they seek to clothe all their processes of manufacture, and he believes that most of these accounts are purposely made complex to mislead and deter from any attempts at imitation.

"It is his opinion, founded on a long experience and study, that two-thirds of the labor expended in China is useless; and that with one-tenth of the ingenuity displayed in the invention of the cotton gin, machinery can be devised here which will supersede every hand manipulation except that of the picking, and which will produce results more uniform and of a better quality than can be otherwise arrived at. He recommends to the Commissioner that in future documents on the subject of tea culture, Oriental accounts be disregarded, and that, a plain statement of the principles which govern the preparation of tea be substituted. Processes then would suggest themselves, he thinks, to the intelligent experimentalist that would remove the veil of mystery which has heretofore clouded the whole question, and result in the successful production of an American tea produced on American principles."

THE Congressional Committee on the Tariff have modified considerably their bill as last reported by us; the following changes being most notable:

Quinine—Salts of, other than sulphate of, and all preparations of Peruvian and like barks, 20 per cent ad valorem; sulphate of, 10 per cent ad valorem.

Drugs—All drugs and chemicals and preparations, 35 per cent ad valorem.

Seeds—Anise, anise-star, chia, canary, sesamum, caraway, cardamom and caranda seed, sugar cane and seeds of forest trees, 20 per cent ad valorem.

Tamarinds—Preserved, 20 per cent ad valorem.

Matches of all kinds, 35 per cent ad valorem.

Tannin and tannic acid, $1 per pound.

THERE is some talk of having a United States Commission appointed to visit France during the coming Exhibition, to confer with a similar Commission of French citizens, regarding a modification of the French tariff on products which, at present, discriminates against those sent from this country, and is especially severe in the case of medicinal preparations.

MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

The Areca Nut Palm.

THE *Areca Catechu* or the Areca-nut Palm,* is a most elegant palm, with a straight, smooth trunk, 40 to 50 feet high, and about 20 inches in circumference. The inflorescence is arranged on a branching spadix, with the male flowers on its upper portion and the female near its base. The leaves are few, from 6 to 9 only, all terminal, spreading, very large and long. The tree is cultivated in the Malayan Archipelago, the warmer parts of the Indian Penisulas, Ceylon, Indo-China and the Philippines. It is probably indigenous to the first-named region.

The Areca Nut, or Betel Nut, as it is more commonly termed, is, on an average, about the size of a nutmeg; it is roundish-conical in form, flattened at its base, of a reddish-brown or rusty-gray color externally, and marked conspicuously with a hilum and a network of veins, which give the surface a somewhat tesselated appearance. Areca nuts are hard, heavy, and difficult to break or cut, but, when broken, the nucleus is seen to present a somewhat marbled appearance, like that of the officinal nutmeg, and caused by this passage inwards of the reddish-brown veins, which are seen on the surface, into the whitish albumen or endosperm. The albumen is therefore of the kind called ruminated. At the base of this albumen the small conical embryo may be observed.

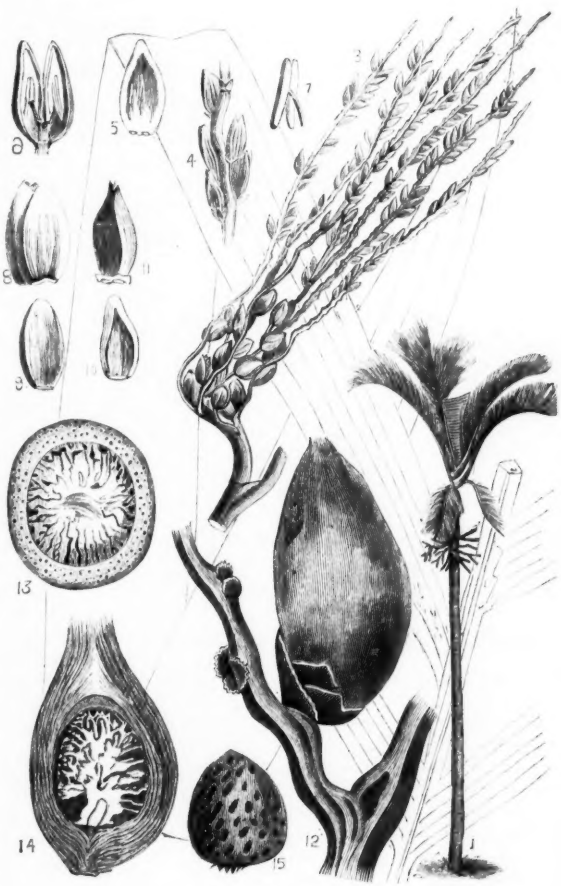
Areca nuts have no marked odor, although they have been described as somewhat cheesy; but their taste is feebly astringent. In some districts the dark veins are regarded more especially as the seat of their astringency, hence the quality of areca nuts is judged of by the appearance they present when cut through. Thus, "if the white or medullary portion which intersects the red or astringent part be small, and has assumed a bluish tinge, and the astringent part is very red, the nut is considered as good quality; but when the medullary portion is in large quantity, the nut is considered more mature, and, not possessing as much astringency, is not esteemed so valuable." This test of the quality of the nuts does not appear, however, to be founded on any reliable data.

According to Morin, areca nuts contain *tannic* and *gallic acids*, *gluten*, *red insoluble matter*, *fixed oil*, *gum*, *oxalate of lime*, and *lignin*. Flückiger

* The vernacular names of the Areca palm are: *Sanskrit*: guvāka, pūga, kramuka. *Bengali*: supāvi, gus. *Hindustani*: supāvi. *Chinese*: pin-men ("guest's door"); jen-pin; si-chang-tung ("the red washing away temper," or "antimalarial panacea"); pin-lang, which is evidently only a corruption of the *Malay*: pinang. *Javanese*: jambi. *Telugu*: areca (this name was brought to Europe by the Portuguese in the 16th century).

and Hanbury found them to contain 14 per cent of a *crystalline fatty matter*, *tannic acid*, nearly 15 per cent of an *amorphous tannic matter*, 2.26 per cent of a *brown ash* containing *peroxide of iron* and *phosphate of magnesium*, and other substances. They also came to the conclusion "that *catechin* is not a constituent of areca nuts, and that any extract made from them must be essentially different from the *catechu* of *Acacia*, or of *Nauclea* (*Uncaria*), and rather to be considered a kind of tannic matter of the nature of *ratanhia red or cinchona red*."

Various practitioners have testified to the astringent properties of the areca nut, and its consequent efficacy in checking diarrhœa. The powdered seeds have also long been held in some reputation as an anthelmintic for dogs, and areca has been now introduced into the British pharmacopœia, on account of its supposed efficacy in promoting the expulsion of the tapeworm in the human subject. It is also reputed to be efficacious against the roundworm (*Ascaris lumbricoides*. Dr. Barclay, who appears to have been the first practitioner who called attention to the remedial value of the areca nut in the expulsion of tapeworm, administered it in powder, in doses of from four to six drachms, stirred up in milk. The worm, he says, is usually discharged from four to five hours afterwards, alive. The medicine was administered before breakfast, a smart purgative having been given the preceding day, and no food taken for at least twelve hours previous. Other practitioners have also testified to its value as an anthelmintic, but at present the results have not been such as to lead to the opinion that it is likely to form a valuable addition to our materia medica. Dr. Warner says, "anthelmintic virtues have been assigned to the nut, but it can hardly have any claim to this character, as amongst the Hindoos and Burmese, who use it habitually as a masticatory, intestinal worms (*lumbrici*) are almost universally met with."



Areca Catechu L.

1. The Areca-nut Palm. 2. Portion of a leaf. 3. Small part of a spadix. 4. Several male flowers. 5. Petals of a male flower. 6. Vertical section of a male flower. 7. A stamen. 8. A female flower. 9. Sepal. 10. Petal. 11. Pistil from the same. 12. A ripe fruit. 13. Transverse, and 14. Vertical section of the same. 15. The seed.

In conjunction with unslaked lime (*chunam*), and the leaves of *chavica* (*Piper Betle nat. pân*), the *betel pepper*, areca nuts form the celebrated masticatory of the East, called betel. For this purpose, the nut is either softened by boiling in water, or it is used in a young and tender state; it is then cut into small pieces, and rolled up with a little lime in the leaf of the betel pepper, and the whole chewed; but in some cases it is combined with aromatics, as cardamoms or camphor. This masticatory is regarded as a prophylactic against dysentery; but it is chiefly used to impart an ornamental red hue to the lips and mouth, and an agreeable odor to the breath. Its constant use, however, turns the teeth black.

In England and in the United States, and elsewhere, areca nut charcoal is used as a tooth powder. In reference to this, Pereira says, "I know of no particular value it can have over ordinary charcoal, except, perhaps, that derived from its greater hardness."

In the southern parts of India, and also, it is said, in Ceylon, an astringent extract is prepared from areca nuts which was at one time considered to form part of the catechu of commerce, and was officinal in the Edinburgh Pharmacopœia. At

the present time, however, we have no evidence of this catechu being an article of export to Europe, and it is stated by Drury to be a catechu of very inferior quality. The chemical composition of this extract, as already noticed, is also different from the ordinary kinds of commercial catechu.

Various other parts of the betel nut palm are also used in the East; thus, in some parts of India, the juice of the young leaves is mixed with oil, to form a useful embrocation in lumbago and other painful local affections; the flowers are employed in Borneo, mixed with other medicines, as charms, for the cure of many diseases; the spathes are made into drinking vessels, and are used for other purposes; the dry expanded petioles are said to form excellent ready-made splints for fractures; and various parts of this valuable palm are also applied for other useful purposes.

Jaborandi and Hoarseness.

Dr. Evselin (see *The Practitioner* of February) gave an infusion of 45 grains of jaborandi leaves to a patient suffering with hoarseness and pain in the neck, due to a cold. The effects of the remedy were soon manifested, profuse perspiration continued for two hours and soaked the bed-linen. Salivation was also marked. The hoarseness disappeared during the sudorific action, but chills occurred two or three times during the same period, and the patient in the end complained of weakness and lassitude. Next day the left submaxillary gland was enlarged and tender, the appetite poor, and the saliva thick. The effect on the hoarseness was all that could be desired, but it was attained at a cost of very great discomfort.

Jaborandi in Chronic Pleurisy.

Professor Da Costa in his clinic (see *Med. and Surg. Rep.* of Feb. 23d) showed a man, aged 23 years, who had chronic pleurisy since last summer, and had been under treatment at the Episcopal Hospital, when his chest had been aspirated, and five pints of clear serum removed. Five weeks afterwards, he had a return of chills, which had troubled him daily previous to the operation, and an examination showed a re-collection of fluid. As an alternative to aspiration, Dr. Da Costa, on the patient's admission to the Pennsylvania Hospital, gave him a drachm of jaborandi, four times daily. At the end of a week, under the influence of the remedy, the chills passed away, likewise the accumulation of serum in the pleural cavity, the temperature fell from 101° to 98° and 99°, and the patient ultimately recovered. Profuse sweating continued during the action of the remedy.

Table-Salt in Milk for Children.

Dr. J. Q. Smith says that, when cow's milk disagrees with young children, the addition of a small quantity of table-salt will often correct the difficulty.

HYDROBROMIC ACID.

Editors of New Remedies:

I have read with much interest the paper on hydrobromic acid, presented by Dr. Squibb at the last annual meeting of the Medical Society of the State of New York, and published in the February number of New Remedies. Some of the positions taken by the author are at variance with my views, and I therefore take the liberty of discussing them, with your permission, in your journal.

It is now generally admitted that the object of administering a bromine salt is to obtain the effects of bromine upon the system. Now, doubtless, to obtain this effect, the salt must be decomposed by an acid, and the gastric acids are known to be capable, to a certain extent, of accomplishing this object. What is this extent? Its indefiniteness results from the variable amount of free acid present in the stomach at the time of the administration of the salt. If acids are entirely absent, the bromide will be absorbed and eliminated, and no effect of bromine will be obtained, for the effect always depends upon the amount of hydrobromic acid produced by the decomposition of the salt, and it is probable that generally a part of the salt becomes absorbed before being broken up, and the effect of the bromine of such part lost. This is the reason that hydrobromic acid was proposed as a medicine, thus avoiding the unreliability of the stomach as a laboratory. It is found, clinically as well as in theory, that a smaller amount of bromine, in the form of hydrobromic acid, will produce the specific effects of this halogen upon the system, than when administered chemically united to a base. Hence, it is not necessary or proper that the relative amount of bromine in hydrobromic acid and in bromide of potassium should be considered in determining what the dose of the acid should be.

Dr. Squibb recommends a complicated method of preparing hydrobromic acid, in no particular like the one now almost universally used. The object of his method, which he minutely describes, is the production of a purer and stronger acid, to be accepted as a standard. I will first consider the question of purity. There can be no doubt that the method he proposes will produce a chemically pure acid, or nearly so, while the simple plan of decomposing bromide of potassium with acid will give us an article containing in solution bitartrate of potassium, and possibly free tartaric acid and bromide of potassium. If the proper proportion of the salt and acid is used, they can only remain as impurities, by failure of complete chemical union of the base and acid. It will be found that the amount of each, unappropriated, will be quite minute, and consequently entirely harmless and unobjectionable. The solubility of bitartrate of potassium (cream of tartar) is given

in the U. S. Dispensatory at 1 part to 180 of water. Therefore, half a fluid drachm of hydrobromic acid contains about one-sixth of a grain of this impurity, which, I am sure, is sufficiently free from serious contamination to be regarded as unobjectionable. But supposing one-half as much tartaric acid should be used, as provided for in the formula, resulting in the formation of the soluble tartrate, instead of the nearly insoluble bitartrate of potassium; the impurity could only be considered as entirely harmless, and the value of the acid, as a medicine, in no way detracted from. Indeed, when we administer bromide of potassium, the stomach is permitted to produce the hydrobromic acid, and retain all of the by-products we now seek to eliminate. Hydrobromic acid prepared by the tartaric acid method is a clear, strongly acid fluid, that clinically or by any other test, save chemical analysis, presents no suspicion of containing a trace of the harmless impurities I have described. That it is laudable to urge the use of pure drugs I admit, but taking into consideration that isolation of active principles is the exception in medicinal compounds, and that in this case the patient takes less of impurities than he does with his daily bread, and remembering that the tartaric acid formula can be accurately followed by any novice and without chemical appliances, while druggists can rarely be found in this country who have sufficient experience in chemical manipulations to correctly follow the method given by Dr. Squibb, even if in possession of the required apparatus, embracing also, as it does, the question of cost, I think I am safe in asserting that the tartaric acid plan will continue to be preferred by both physician and pharmacist.

Dr. Squibb advises that a standard for the strength of hydrobromic acid be adopted, one-half that of bromide of potassium; that is, containing by weight one-half as much bromine, and also, that it always be dispensed by weight. That this drug should have a standard strength is certainly desirable, but to me it is questionable if the proposal of still another formula, three or four times the strength of those in use, will accomplish the object. I can hear of only two formulas for the production of the acid, by means of bromide of potassium, tartaric acid, and water; one ascribed to Dr. Fothergill, and one furnished by myself. To explain the disparity between these formulas, will necessitate the rehearsal of a part of their history. In 1874, I determined to prescribe hydrobromic acid for the purpose of obtaining the effects of bromine, instead of using bromide of potassium. I prepared the acid by decomposing bromide of potassium with tartaric acid. I am not aware that previous to that time any person had ever prescribed this acid, or had prepared it by this formula. I therefore believe I have a right to claim to be the originator of the formula, as well as the idea of using the acid as a therapeutical agent. After having prescribed it 60 times, I wrote a paper, in the autumn of 1874, for the *Peninsular Journal of Medicine* (Detroit), which appeared in the February number, 1875, in which I gave my reasons for suggesting the acid as a medicine, the result of my clinical experience with it, and the following theoretical formula:—$KBr+_2T+HO=KO_2T+HBr+HO$, specifying that each fluid drachm of the finished preparation shall represent 10 grains of bromine. Undoubtedly this was the first that ever appeared in print, in regard to the use of hydrobromic acid as a medicine. Dr. Fothergill states, in the first paper he wrote on the subject, that he transcribed my paper for a British medical journal, and gave my formula to his hospital pharmacist with instruction to prepare the acid. He then gives his experience with it for twelve months, and finally the working formula. He does not allude to the fact that this formula provides for less than ten grains of bromine to the fluid drachm. In it the bromide of potassium and tartaric acid are not given in the correct proportion for chemical combination. I therefore conclude that the working formula was furnished by the pharmacist, and that Dr. Fothergill did not critically examine it, but published it under the apprehension that it was correct and in conformity to my theoretical formula. Dr. Fothergill does not claim any originality in connection with the subject. I deem it unfortunate that the error occurred, as it has caused considerable inquiry as to what formula to adopt.

My standard of ten grains of bromine to the fluid drachm of the finished preparation is entirely an arbitrary one, but I have thought best not to advise a change of strength, because it is found that of this strength half a fluid drachm is a proper average dose for an adult, and is a convenient one in making combinations with other medicines, or with syrup. Of this strength it requires considerable dilution before it is swallowed. If it should be made more concentrated, it would only result in lessening the dose, so that, when properly diluted or swallowing, the strength would be unchanged, and the same amount of bromine would be taken in either case.

I can therefore see no reason why the tartaric acid formula should be discarded, nor do I believe it will. The Michigan Pharmaceutical Society have adopted, what it is pleased to denominate as my formula, and published it in the transactions for 1877. It is not improbable that the next edition of U. S. Pharmacopœia will contain a formula for the preparation of hydrobromic acid, and the desirable strength be determined for Americans. If other than ten grains of bromine to the fluid drachm be adopted, the change in the formula will only be in reference to the amount of water to use.

My objection to the dispensing of hydrobromic

acid by weight is, that fluid medicines are always administered by measure, and it is therefore more convenient for the prescriber to order by measure.

The following working formula provides for ten grains of bromine in each fluid drachm of the finished preparation. In my opinion it should be denominated dilute hydrobromic acid, in conformity to the rule applying to the other weaker mineral acids.

Bromide of potassium	120 grains.
Crystallized tartaric acid	153 grains.
Water	1 fluid ounce.

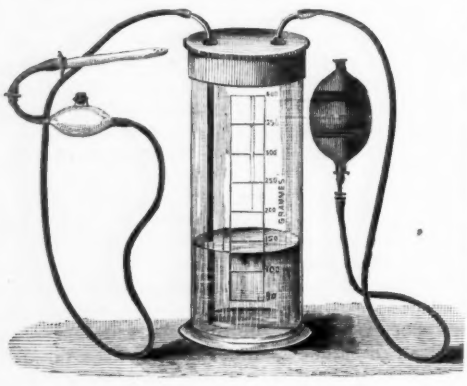
or

Bromide of potassium	11 avoir. ounces.
Crystallized tartaric acid	14 avoir. ounces.
Water	40 fluid ounces.

Dissolve the bromide and then the acid in the water, and keep at a low temperature till precipitation ceases, and decant.

There are many physicians who not only use this acid almost to the exclusion of the bromine salts, but for many purposes where the latter would not produce similar results. I will close this paper with the statement that I have prescribed between one and two *barrels* of hydrobromic acid. DE WITT C. WADE.

HOLLY, MICH., March 22d, 1878.



Injection Apparatus.

AT a recent meeting of the Academie de Médecine of Paris, M. Beclard presented, for M. Léard, an injection apparatus without piston or stop-cock. It is constructed, as shown in the adjoining illustration, of a glass receiver, of a capacity of 500 to 1,000 grams and graduated; the upper end is embraced by a metal ring, into which a cap is screwed having two tubulures. Two tubes pass through these openings, to one of them an elastic tube and hand-ball are connected, while the other gives passage to a tube which extends nearly to the bottom of the receiver, and its upper end has a discharge pipe affixed. In the course of the discharge pipe a glass bulb is inserted, having a side opening for the introduction of a medicine to be acted on by the current of fluid.

Compression of the hand-ball creates a pressure of air inside the receiver, and causes a steady flow of fluid through the discharge pipe. By reversing the hand-ball, the apparatus will at once be converted into an aspirator.

Thymol.

THE essential oils of thyme, of American horsemint, and of the *Ptychotis Ajowan* contain a substance, a homologue of phenol or carbolic acid, having the composition represented by $C_{10}H_{14}O$, and known as thymol. For more than two years this has been used by German surgeons, and is now being introduced among ourselves. It was discovered in 1719 by Caspar Neumann, examined chemically by Lallemand and Leonard Doveri, and first used to deodorize unhealthy wounds by Bouillon and Baquet, of Lille, in 1868. In 1875 several German surgeons published investigations of its antiseptic properties, which are estimated to be from 4 to 25 times as powerful under certain circumstances as those of carbolic acid. Thymol is a crystalline, nearly colorless body, with a pleasant odor and an aromatic burning taste. Its specific gravity is 1.028, and it melts at 44° C. It dissolves in 1,200 [300, Flückiger] water, 1 of rectified spirit, 120 of glycerin, and in $\frac{1}{3}$ part of caustic alkalies. Fats and oils also dissolve it readily. It is prepared from the oils of either of the plants before mentioned, but pharmacists should beware of experimenting on English samples of oil of thyme, as but few of them are genuine, or, at least, contain any thymol. The oil is said to yield as much as 50 per cent of thymol on the Continent. Thymol can be manufactured from these oils by treating them with an equal volume of a 20 per cent solution of caustic soda, separating the alkaline liquid, and neutralizing with hydrochloric acid, when the thymol will float to the surface. It may also be obtained by submitting the oils to a low temperature for a few days, when the thymol crystallizes out. Its powerful antiseptic action, exceeding under some conditions that of carbolic acid, its small activity as a poison—about one-tenth of that of carbolic acid—and the absence of irritating effect when it is applied to the skin, all point to its use as a substitute for carbolic acid in the now well-known antiseptic treatment of surgical cases elaborated by Professor Lister. This substitution has been made with great success by Professor Volkmann, of Halle. For the spray solution, this gentleman uses a mixture of 1 part thymol, 10 alcohol, 20 glycerin, 1,000 water; but we understood that a solution in water only, which will not deposit, may be made by adding 1 part of thymol to 1,000 of hot water. For the gauze dressings used by Professor Lister, others were substituted, made by saturating 1,000 parts of bleached gauze with a mixture of 500 parts spermaceti, 50 resin, and 16 of thymol. This prepared gauze is extremely soft and pliant, and, to use the words of the reporter, sucks up blood

and the secretions of the wound like a sponge. The fibres of the gauze being impregnated with spermaceti, cannot, of course, become saturated with the secretions, so that they do not become stiff. Thymol has been used for various skin diseases by Dr. R. Crocker. [See below.] As an internal remedy, thymol does not seem to make much way. It has proved useful in the diseases of the stomach accompanied by fermentation, and Mr. W. H. Stone reports in the *Medical Times and Gazette* that he has found it useful in cases of chorea, one form of which is St. Vitus' Dance. The present cost of thymol is about five times that of the best carbolic acid, but as one part of the former seems to do as much work as 25 parts of the latter, the advantage of price is on the side of thymol.—*The Chemist and Druggist.*

MR. CROCKER'S paper on this subject is published in *The British Medical Journal* of Feb. 13th, and we here embrace as much of his article as relates to the formulæ employed.

In order to adapt thymol for use in the form of a lotion as well as an ointment, Mr. Gerrard, dispenser of the University College Hospital, has worked out the following formulæ: Five grains of thymol dissolved in an ounce of rectified spirit will not be precipitated on the addition of an equal bulk of water; but some will be thrown out when diluted to four ounces, to be redissolved when the proportion of six ounces of water to one ounce of spirit is reached. In the proportion of two grains to the ounce of spirit, it is miscible with water in any proportion. A solution of seven grains of caustic potash in a drachm and a half of water will take up fifteen grains of thymol. A solution of ten grains of caustic soda in a drachm of water takes up thirty grains of thymol. Glycerin increases the solubility in water only very slightly. Further details may be found in Mr. Gerrard's paper in the *Pharmaceutical Journal.*

As an outcome of the above, the following formulæ are recommended by Mr. Crocker.

1. An ointment, consisting of one ounce of vaseline, and from five to thirty grains of thymol; the thymol being dissolved in the vaseline.

2. A lotion, consisting of thymol, five grains; rectified spirit and glycerine, each one ounce; water, sufficient for eight ounces. The glycerine is added to correct the desiccating effect of the spirit alone.

3. A solution of five to eighty grains of thymolate of potash* in eight ounces of water.

As yet, Dr. Crocker has not had occasion to use stronger lotions than the above. He has only lately used the last lotion; but, so far, has found it equally efficacious, while it has the advantages of economy and the readiness with which the strength may be increased. Ointments made with lard instead of vaseline act very well; but vaseline ointments have a better appearance.

* Mr. Gerrard has since found that the alkali merely dissolves the thymol, and that when the vaseline ointment is stronger than twenty grains to the ounce, the thymol should be first dissolved in alcohol, in the proportion of one minim to the grain.

Sulphosalicylate of Quinia.

CAHOURS in 1843 recognized the fact that salicylic acid combined with the vapor of sulphuric anhydride. Mendius in 1857 studied this combination, and named it sulphosalicylic acid. Recently Schiff and Remsen have also found that this compound may be prepared by the action of concentrated sulphuric upon salicylic acid. Equivalent quantities of sulphuric acid (98 parts) and of salicylic acid (138 parts) are gently heated together,* producing the new compound in form of a solid deliquescent mass, soluble in water, alcohol, and ether, from which solutions it is deposited on evaporation in long, prismatic needles. Ferric chloride imparts to the solution an intense red-wine color, differing in this from salicylic acid, which strikes an intense violet.

The best starting point for the preparation of sulphosalicylates of definite composition is the barium salt, which is easily obtained by saturating the hot compound acid with barium carbonate, filtering and—if the salt is desired in a solid condition—cooling or evaporating the solution, when barium salicylate will crystallize out in hard, shining monoclinic prisms, but little soluble in cold, quite soluble in hot water, and insoluble in alcohol. Its formula is $C_7H_4BaSO_6+3H_2O$; but by varying the temperature, or by concentrating the motherwaters left after the first crystallization, two other modifications of barium salicylate may be obtained, differing in crystalline shape, and probably in water of crystallization.

To prepare sulphosalicylate of quinia, a boiling hot solution of barium sulphosalicylate is exactly decomposed with a boiling solution of neutral quinia sulphate, whereby barium sulphate is precipitated. This is filtered off, and the filtrate (which generally has a roseate tint) cooled, when it becomes covered with a crust of crystals of the new quinia salt. By evaporating the motherwaters and cooling, successive crops of crystals may be obtained.

Quinia sulphosalicylate is but little soluble in cold water, although, after having been in contact with it for some time, it dissolves completely. In boiling water it is much more soluble, insoluble in absolute alcohol or ether, but soluble in ordinary alcohol and in chloroform.—*L'Orosi*, Jan., 1878, 7.

*$C_7H_6O_3$	+	H_2SO_4	=	$C_7H_6SO_6$	+	H_2O
Salicylic acid	+	sulphuric acid	=	sulphosalicylic acid	+	water
138		98		218		18

Skunk Cabbage as a Remedy for Chorea.

PROF. H. C. WOOD suggests a saturated tincture of the rhizome of *Dracontium fœtidum* given in doses of 60 to 90 drops, three times daily, as a remedy for chorea. It must be made from fresh roots collected in the fall and before drying.

SCENT-YIELDING PLANTS,

BY G. W. SEPTIMUS PIESSE, PH.D., F.C.S.

(*Continued.*)

Orange, Bergamot, Lemon, Citron.

Of all scent-yielding plants none has a value at all equal to that of the orange. It is a mine of perfume in itself. The blossoms yield, according to their mode of treatment, two distinct odors, one having the true scent of the flower, the other a scent called Neroli. Orange-peel, too, furnishes a delightful perfume, with which all of us are familiar; and lastly, the leaves give a scent inferior only to the true neroly. Here, then, we have from one plant no fewer than four perfumes. Orange stocks are raised from seeds or pips, and in the third year they are grafted either with the Sweet Portugal or Bitter Bigaradier. In the fifth year, they should be planted where they are to stand; the soil

The Bergamot Lemon.

in which they are to be placed should be trenched at least four feet deep, and well manured, inasmuch as fifty years, nay, even a century afterwards, the results of good early treatment will be apparent. Orange trees require fifteen years to reach maturity, but they will produce both flowers and fruit in four or five years. When in full vigor, each tree yields on an average twenty-five pounds' weight of blossoms annually. Many plantations of orange trees at Nice are more than a hundred years old. At Fontainbleau there may now be seen orange trees bearing flowers and fruit at the same time, that were planted by an ancestor of mine two hundred years ago. At Nice, a public market exists for the sale of orange blossoms during the season when the trees are in bloom. The bitter orange-flowers fetch three pence per pound, those of the sweet orange, twopence. At Nice, the market season for such flowers generally lasts upwards of a month, and during that time there are sold from fifteen tons to eighteen tons of flowers daily. A ton of flowers will, by means of distillation, yield say, forty ounces of neroly otto, worth twenty guineas; and the residuary water—orange-flower water—five guineas. Orange-flower fat or butter, and oil, are manufactured to a large extent by the enfleurage and maceration process; it requires about eight pounds of blossoms to enflower one pound of grease, the operation being divided into about thirty repetitions of a small quantity of flowers over or in the same grease. By digesting this orange-flower grease in the proportion of six pounds to eight pounds in one gallon of rectified alcohol, there is obtained the extract of orange-flowers, a handkerchief perfume which is surpassed by no other scent. It is exquisite in itself, and when blended with extracts from other flowers, it composes what is termed a "bouquet."

The otto of the orange fruit is procured from the peel by what is called the écuelle process. The écuelle is a tinned-copper bowl, furnished with concentric rows of short spikes or teeth,

An Ecuelle.

and a hollow handle with a gutter from it to the edge of the bowl, through which liquid from the hollow handle can be poured. In order to obtain the otto, the fruit is rolled by hand over and over the spikes, thus breaking the peel in such a manner that the otto spurts out into the écuelle, and finds its way into the hollow handle, which, when full, is emptied into another vessel. An inferior quality of otto is procured by rasping and slicing the peel and then pressing out the juice; and this, and the better process just described, are those by which the fruits of all citronworts are divested of their scent-yielding properties, operations which are put into practice to a great extent at Messina, in Sicily.

The Citrus Bergamia or Bergamot lemon is a plant of great value as a scent-yielder; its perfume is so much in demand that its annual production in Italy has never satisfied the market. The Messina dealers and their allies carefully adulterate the true bergamot otto with lemon otto, thus spoiling an article worth from thirty shillings to forty shillings per pound, in order to sell it at ten shillings. One hundred fruit will

yield about three ounces of otto. The name of this variety of citron is derived from the city of Bergamo, in Lombardy, from whence, so far as we can ascertain, the otto was first sold. The otto of bergamot of the finest quality is obtained by means of the écuelle, but about four-fifths of it in the market is a distilled product, or one expressed from the rasped rind of the fruit. About 40,000 lbs. weight of otto of bergamot are anually imported into England.

Among one of the leeward Carribbees is Montserrat, a little island on which Citrus Limetta grows most prolifically, and in almost an indigenous manner. Under the care of Mr. Joseph Sturge, the Montserrat Company, of which Mr. Sturge is director, annually produce no less than 1,000 lbs. of the true otto of citron, all by means of the écuelle process, and it is so pure that it is worth twice its present price in the market; but the products of Sicily, which are by no means good, compete with it to its disadvantage. Mr. Sturge states that "his orange orchards consist of about 500 acres, and that each acre contains about 200 trees. If takes seven years from the seed for them to come into full bearing; they flower more or less whenever they get heavy rain, and the fruit ripens in about four months after the flowers appear." He therefore gets fruit all the year round, but the chief harvest is from September to January.

The importation of from 85,000 lbs. to 90,000 lbs. weight of otto of lemon annually into England proves that Britannia has a great liking for this scent, which is extracted by rasping the fruit and afterwards expressing the pulp so produced of the Citrus Limonum. The otto of lemon in the market is principally from Messina, where there are hundreds of acres of lemon groves; indeed, the extraction of the ottos of lemon, orange, and bergamot constitutes the chief industry of Sicily, particularly in the vicinity of Palermo. Here, instead of the écuelle for breaking the peel, a drum spiked inside is employed, and in this 100 fruit or more are operated on at one time. No doubt, sooner or later, steam will be employed to rotate these drums, and thus we may expect the supply of these scents to be kept up equal to their demand; nevertheless, as the land of Italy is already occupied, there is ample room in European markets for similar ottos, should they be produced in Australia.—*From the London Garden.*

Sarracenia Purpurea in Gout.

According to Foucaut the stem and root of Sarracenia purpurea is an effective remedy in chronic form of gout. It is employed in form of an infusion, made from 1 to 2 spoonfuls of the powder at a time, mornings and evenings, and once during the day 1 spoonful made into an infusion as a prophylactic. The violence of the attacks becomes greatly diminished, and the alveolar movements more regular. — *Arch. der Méd. in Ph. Zeit. f. Russl.*

Absorption of Tincture of Iodine by the Skin.

Dr. L. Menager has experimented upon children with a solution of equal parts of tincture of iodine and glycerin, rubbed into the skin, and has arrived at the following conclusions. 1. Iodine in tincture mixed with glycerin and applied to the external integument is absorbed. 2. This absorbed iodine is invariably found in the secretions and in the urine. (Dr. M. tests for iodine by adding a little starch to the urine in a test-tube and then dropping a few drops of nitroso-nitric acid into it. This gives a blue or violet color according to the quantity of starch present.) 3. This application may give rise to certain symptoms, usually a variety of mild temporary albuminuria. 4. Dressings containing tincture of iodine may be employed as a means of introducing this medicine into the system when it cannot be taken by the stomach. 5. It must not be forgotten that when this absorption takes place in patients subject to nervoso-vascular erethism, as in certain cases of phthisis, where these dressings are often practised, they may do more harm than good.—*Med. Times.*

Viburnum Prunifolium.

The fluid extract of Viburnum prunifolium is mostly employed as a prophylactic in threatening abortion, and in cases of habitual abortion, in doses of ½–1 teaspoonful four times daily. In dysmenorrhœa, accompanied with pain and great loss of blood, it greatly alleviates the symptoms if administered from a few days before, until a few days after menstruation. In cases of spasmodic or neuralgic dysmenorrhœa it should be combined with sedatives. The fluid extract should be prepared from the bark of the root and the young branches. The ordinary dose is 1.8 to 3.75 grammes (½ to 1 drachm) every 2 to 6 hours.—*Gynæcol. Trans. in Ph. Zeit. f. Russl.*

Jaborandi in Scarlatinal Dropsy.

Dr. H. H. Levy recently reported in the Richmond Academy of Medicine (*Virginia Med. Monthly*) the results following the administration of enemas of f. ℥ i. of fluid extract of jaborandi in f. ℥ i. of thin starch to a boy six years old, suffering from scarlatinal dropsy and suppression of renal secretion. The enemas were to be given every four hours, but through misunderstanding were not so frequently given at the outset. A blister was placed over the kidneys and afterwards poultice and drew well. Five convulsions occurred in quick succession after the second enema, and were followed by a free passage of urine. The jaborandi stimulated the skin, kidneys, and salivary glands into action, and next day the boy was conscious and in good spirits. For some time the patient could not see, but the skin and glands continuing to act, sight was restored and the dropsy removed in a couple of days.

CONTRIBUTIONS FROM THE SCHOOL OF PHARMACY OF THE UNIVERSITY OF MICHIGAN.

Analyses of Secret Remedies.

Reported by HENRY B. PARSONS, Assistant in Pharmacy.

1.—"*Potato Oil.*"

Entirely vegetable, contains no petroleum oils, no danger of explosion, and much cheaper than kerosene, were some of the claims made for it.

It contained from 25 to 30 per cent of *petroleum naphtha*, with enough *camphor* to hide its odor; the remainder was ordinary *kerosene* of good quality. It flashed at common temperatures and was *very explosive and dangerous*.—PARSONS.

2.—"*Corassa Compound.*"

Sold as a cure-all. Contained about 80 per cent of granulated sugar, 19 or 20 per cent pulverized *gentian root*, and about 1 per cent of *cochineal*. Treated with water the mixture becomes red.—PARSONS.

3.—"*Weatherly's Michigan Catarrh Cure.*" (W. W. Weatherly, Grand Rapids, Mich.)

Sugar, pulverized	47.5.
Common salt	25.0.
Borax	14.1.
Moisture	9.2.
Potassium trace Sulphates trace Oil of peppermint Loss	4.2.
	100.00

It may be made as follows: mix two parts of pulverized sugar with one part each of borax and common salt, and add q. s. peppermint oil.—H. W. CALKINS and HUGO THUM.

4.—"*Rhodes' Fever and Ague Cure, or Antidote to Malaria.*" (Providence, R. I. Price, $1.)

When shaken the liquid has a dark-brown, muddy appearance. When allowed to rest, it separates into a clear, brownish-yellow liquid, and a dark-brown, heavy sediment, occupying about one-fifth of the bottle. It contains no alkaloids. The following formula is an approximation only:

Ferric oxide	℥ ij.
Tr. ferric chloride	f ℥ s.
Magnesic sulphate	℥ ss.
Valerian root, powd	℥ ij.
Molasses,	
Alcohol, of each	f ℥ ij.
Water to make	f ℥ xii.

—HENRY STRECHER, *Assistant.*

Mr. O. L. Churchill reported an analysis of this same medicine, and stated that it contained *charcoal*, but he does not mention the presence either of valerian root or ferric oxide. It is not improbable that its composition has been modified since that time. See the *American Journal of Pharmacy*, Sept., 1876, p. 390.

The compound containing ammonic nitrate and ferric oxide, which was reported last month as a "disinfectant," is also much used to produce nitrous oxide for *inhalation*. It has given relief in a large number of painful affections.

Belladonna as a Remedy for Collapse.

REINARD WEBER, M.D., recommends the use of belladonna as a restorative in collapse, for which it has been customary to administer camphor, musk, and alcoholic stimulants. He has also employed it as an antidote to the toxic effect of digitalis, and reports a case in which a fourth of a grain of the extract had the effect of removing symptoms of collapse from digitalis. In a case of gastro-enteritis in a woman aged 41 years, a grain of the extract with 20 drops of tincture of opium and ½ drachm of chlorate of potash relieved the symptoms of failing heart-action. And in a third case of a little girl of 6½ years, ¼ of a grain relieved the coldness of the surface, difficult breathing, and bronchial congestion occurring in the fourth week of a typhoid fever. He expresses his belief that, when used in medium or small doses, belladonna, through its action upon the vaso-motor system, will be of service in cholera collapse.

OUR PRESENT KNOWLEDGE OF THE CINCHONA ALKALOIDS.

BY CHARLES RICE.

I. THE CHEMISTRY OF THE CINCHONA ALKALOIDS.

THE great importance of the various cinchona alkaloids as remedial agents, and the careful experiments at present going forward to determine their comparative therapeutic effects, make it highly desirable to place before our readers a concise account of their history and properties, so far as known, to the present time. This appears to be so much the more necessary as the usual works of reference accessible to pharmacists and physicians either contain many antiquated statements, or altogether fail to give a sufficiently complete account of the subject.

Before recounting the various alkaloids hitherto discovered in cinchona barks, it should be stated that but few barks contain more than 3 or 4 of the below-named alkaloids, that none contains all of them, and that all barks generally contain one alkaloid in prevailing proportion. Not only do the various species of *Cinchona* vary in the kind of alkaloids contained in them, but even the same species, when grown in different localities, and under different circumstances or treatment, may differ both in the kind and in the percentage of the alkaloids it contains.

The *natural* cinchona alkaloids, that is, those which are known to exist *as such* in cinchona barks, may be divided into two classes, one consisting of the crystallizable and the other of the amorphous alkaloids. The latter bodies are generally comprised under the name quinoidine

(chinoidine), which term has in the course of time been applied to two entirely different substances, which ought to be clearly distinguished. In the first place, it was first applied, as a collective term, to all the *amorphous* alkaloids, existing *naturally* in any one bark, and particularly in Calisaya bark. But, since during the manufacture of the commercial cinchona alkaloids, in consequence of overheating or of certain reactions, some of the crystalline alkaloids are often accidentally (and to the great loss of the manufacturer) converted into the uncrystallizable or amorphous ones, the term quinoidine was afterwards applied to this secondary product obtained in quinine-factories, and which consists of a mixture of the naturally occurring amorphous alkaloids, together with those which have been produced artificially and accidentally.

The following list comprises all the natural and secondary cinchona alkaloids known up to the present time:

A. NATURAL ALKALOIDS:

Crystallizable:		*Amorphous:*
Quinia,*	These five constitute the cinchona-alkaloids proper.	Dihomocinchonia,
Quinidia,*		Paytamia,
Cinchonia,*		Cusconidia,
Cinchonidia,*		Dicinchonia,
Quinamia,		Diquinidia,
Quinidamia,		Paricia,
Homocinchonia,		A liquid alkaloid, unnamed.
Homocinchonidia,		
Paytia,		
Cusconia,		
Aricia,		
Javania.		

B. ARTIFICIAL OR SECONDARY ALKALOIDS.

Quinicia.
Cinchonicia.
Quinamidia.
Quinamicia.
Homocinchonicia.
Apoquinamia.
Protoquinamicia.

Quinia: $C_{20}H_{24}N_2O_2$. On precipitating a solution of this alkaloid in dilute acid by an excess of ammonia or soda, the precipitate is at first amorphous and anhydrous, but soon afterwards takes up three molecules of water, and then appears in form of small crystals. The anhydrous variety is also partially produced in small white needles, by precipitating a slightly warm solution of a salt of quinia with soda or sodium bicarbonate. Both varieties may also crystallize in very long thin prisms, forming a mass which is as light and flocculent as the commercial crystallized sulphate. The crystalline anhydride melts at 177° C. (351° F.); the trihydrate at 57° C. (135° F.); the former is soluble in water without previously melting, and, on cooling of the solution, separates again in star-formed needle-groups; the latter, however, melts in boiling water, and the solution, on cooling, only shows a milky turbidity, without the least sign of crystallization. The anhydride is soluble in 1960 parts of water at 15° C. (59° F.); the trihydrate in 1670 parts.

Quinia is also soluble in cold (6 parts) and boiling (2 parts) alcohol, glycerin (200 parts), chloroform, carbon disulphide, benzole, petroleum-ether, volatile and fatty oils. According to Pettenkofer, olive oil dissolves 23.8 per cent.

The anhydrous alkaloid requires for solution 21 parts of washed ether. The solution, on slow evaporation, separates a portion of the alkaloid in fine white needles, the remainder in an amorphous condition, which gradually assumes a crystalline form.

Sometimes the ethereal solution suddenly turns to a jelly, owing to a separation of quinia. In this case the alkaloid has assumed a form which is much less soluble in ether, requiring 16 to 25.5 parts at 15° C.

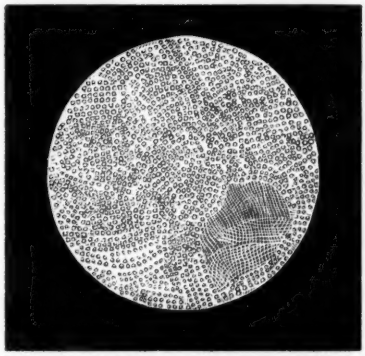


FIG. 1.—Quinia Sulphate with Potassium Sulphocyanide.

The residue obtained by evaporating such a solution is amorphous, but assumes at once a crystalline shape, if dried at 110–120° C. (230–248° F.).

A solution of quinia in dilute sulphuric acid exhibits a blue fluorescence, while a solution in dilute hydrochloric acid does not possess this property. But when highly concentrated, or in presence of certain foreign substances, particularly metallic chlorides, even the sulphuric acid solution may be devoid of fluorescence.

With chlorine and excess of ammonia it produces a green substance, thalleioquin (NEW REMEDIES, 1877, 349).

On adding to a solution of sulphate of quinia in 10 parts of weak alcohol, containing 5 per cent of sulphuric acid, an alcoholic solution of iodine, until a black precipitate is no longer formed, the quinia is precipitated as iodo-sulphate of quinia, or "herapathite," having the composition $4C_{20}H_{24}N_2O_2+3H_2SO_4+I_6+3H_2O$, and requiring 1,000 parts of boiling water for solution. This property may be utilized for separating quinia from the other cinchona alkaloids.

* These four are the only cinchona alkaloids which have thus far been used medicinally, or which may be obtained in the market.

The composition of the *neutral* or *common medicinal sulphate* ("disulphate") is: $2\,C_{20}H_{24}N_2O_2, H_2SO_4+8\,H_2O$; that of the acid or soluble sulphate ("bisulphate"); $C_{20}H_{24}N_2O_2, H_2SO_4+7H_2O$; that of the hydrochlorate ("muriate"): $C_{20}H_{24}N_2O_2, HCl+2H_2O$. The neutral sulphate is soluble in 670 parts of water at 6° C=43° F.; in 30 parts at 100° C.=212° F., and in 740

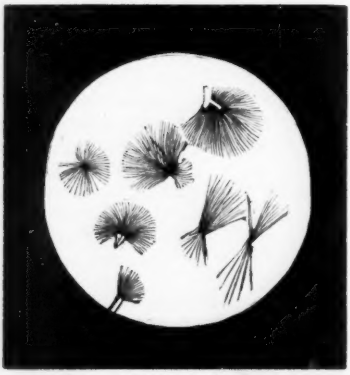


FIG. 2.—Quinia Sulphate, pure.

parts at 15° C.=59° F.; it is also soluble in 100–115 parts of alcohol of 93% at ordinary temperatures.

The best and easiest method for testing sulphate of quinia for other cinchona alkaloids is that of *Kerner* (See NEW REMEDIES, 1877, 136). This consists in mixing 1 part of the sulphate with 10 parts of water at 12–15° C. (54–59° F.), to a homogeneous emulsion, after the lapse of half

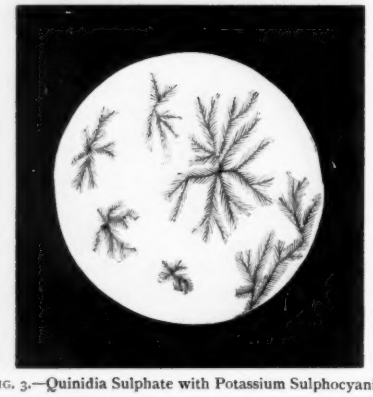


FIG. 3.—Quinidia Sulphate with Potassium Sulphocyanide.

an hour filtering off the liquid portion, and pouring 7 cc. of water of ammonia (spec. grav. 0.96), upon 5 cc. of the filtrate. After carefully mixing the two layers, the solution must appear entirely clear and transparent, if the sulphate was pure.

It has been proposed to modify this method by treating the sulphate of quinia first with *hot* water, because it was argued that any foreign alkaloid, chiefly cinchonidia sulphate, would be more readily dissolved. This practice, however, is objectionable, because the application of hot water may easily decompose the sulphate of quinia itself.

It ought to be added, however, that Kerner's method does not indicate the presence of less than 1 per cent of cinchonidia.

Godeffroy and Ledermann have lately indi-

FIG. 4.—Quinidia Hydrochlorate with Potassium Bromide.

cated a very convenient method of ascertaining the purity of any cinchona alkaloid by mixing one drop of a recently made and freshly filtered cold saturated solution of any one alkaloid with one drop of a solution of potassium sulphocyanide (1 in 10), which produces at once a white cloudiness, less distinct in the case of quinia sulphate than with the other alkaloids. Now, on examining this white cloud under the microscope, with a lens magnifying 110 diameters, each alkaloid will be seen to present peculiar and entirely

FIG. 5.—Quinidia Sulphate with Potassium Iodide.

distinct appearances. In presence of pure sulphate of quinia the cloud will be seen to consist of small globules or vesicles which, even after standing for many days, do not coalesce, nor have a tendency to form groups of crystals (*See Fig.* 1.). The same appearance will be observed by applying the method to the acetate and valerianate of quinia. *Fig.* 2 is pure quinia sulphate.

Quinidia (Hesse's Conchinin, "Conquinia")

$C_{20}H_{24}N_2O_2$ crystallizes from alcohol with $2\frac{1}{2}$ molecules of water in form of prisms: from ether in rhomboëders with 2 mol., and from boiling water in fine laminæ with $1\frac{1}{2}$ mol. of water. While quinia turns the plane of polarization to the left, quinidia turns it to the right. It is distinguished from all other cinchona alkaloids by the difficult solubility of its hydriodate, ob-

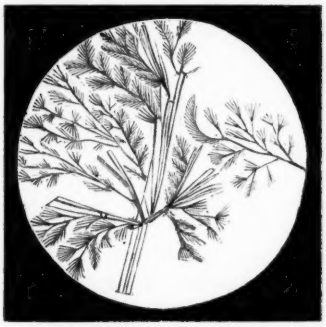


FIG. 6.—Quinidia Bisulphate with Potassium Iodide.

tained by adding a solution of potassium iodide to a solution of quinidia; the precipitated hydriodate requires 1,250 parts of water at 15° C= 59° F. for solution, or 110 parts of 90% alcohol. Quinidia is soluble in 2,000 parts of water at 15° C.=59° F.; in 750 parts of water at 100° C.=212° F.; in 26 parts of 80% alcohol at 20° C.=68° F.; and in 35 parts of ether (spec. gr. 729) at 10° C.=50° F. or in 22 parts at 20° C.=68° F.

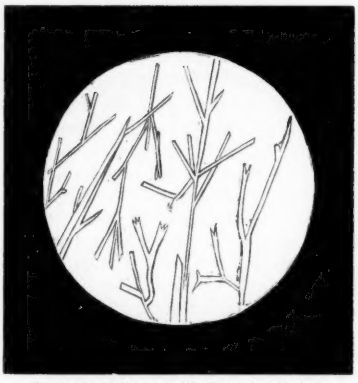


FIG. 7.—Cinchonia Sulphate with Potassium Sulphocyanide.

The *neutral medicinal sulphate* has the composition: $2C_{20}H_{24}N_2O_2,H_2SO_4+2HO_2$, and is soluble in 108 parts of water at 10°C.=50°F., according to Hesse, or in 98–100 parts at 15°C.=59°F. It is very soluble in hot water or alcohol; and is quite soluble in chloroform, of which it requires 19.5 parts at 15° C.=59° F., and 9 parts at 61–62° C.=142–144° F., while sulph. of quinia requires 1,000 parts.

On applying Godeffroy and Ledermann's microscopic method, described above under quinia, the cloud is seen to consist of crystalline groups of remarkable form and arrangement (*Fig.* 3), exhibiting a brownish-yellow color by transmitted light.

By substituting other reagents for potassium sulphocyanide, and applying the method to other salts of quinidia, some very remarkable

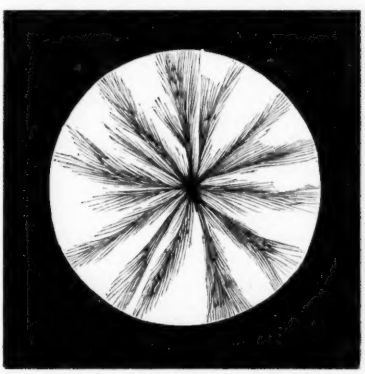


FIG. 8.—Cinchonidia Sulphate with Potassium Sulphocyanide.

and characteristic crystalline forms are obtained: Fig. 4 is quinidia hydrochlorate with solution of potassium bromide (3 in 10); Fig. 5 is quinidia sulphate with potassium iodide (3 in 10); and Fig. 6 is quinidia bisulphate with potassium iodide (3 in 10).

. *Cinchonia*, $C_{20}H_{24}N_2O$,* always crystallizes in

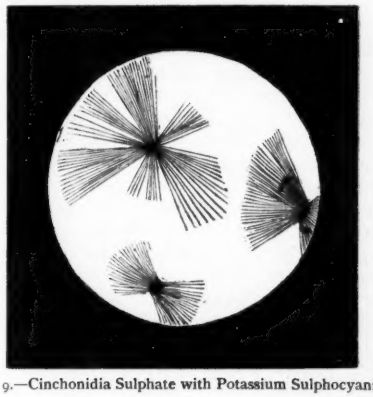


FIG. 9.—Cinchonidia Sulphate with Potassium Sulphocyanide.

anhydrous prisms. Its solution in dilute sulphuric acid is devoid of fluorescence, and it deviates the ray of polarized light to the right. It is soluble in 3,810 parts of water at 10° C.=50° F.,

* Zd. H. Skraup denies the correctness of this formula; a long series of analyses, as well as the study of the hydro-derivatives of cinchonia, lead him to the formula $C_{19}H_{22}N_2O$. If this should be confirmed, it is very probable that cinchonidia and cinchonicia will be found to have the same composition. (*Ber. d. Deutsch. Chem. Ges.*, 1878, p. 311.)

and in 3,670 parts of water at 20° C.=68° F.; in 140 parts of 84% alcohol at 10° C., and in 125.7 parts of the same solvent at 20° C.; in 371 parts of ether; in 280 parts of *pure* chloroform at 17° C.=63° F., according to Oudemans, jun., and in about 35 parts of ordinary chloroform, containing alcohol. Boiling water dissolves but little more than cold water.

The *neutral* or *common medicinal sulphate* has the composition $2C_{20}H_{24}N_2O$, $H_2SO_4+2H_2O$, and crystallizes in compact prisms. It is soluble in 65.5 parts of water at 13° C.=55° F.; in 14 parts of boiling water; in 6 parts of 80% alcohol at 11° C.=52° F., and in 1.5 parts of boiling alcohol. It is also soluble in 22 parts of chloroform at 62° C.=144° F., and in 60 parts at 15° C. =59° F. In ether it is almost entirely insoluble.

The cloud produced by Godeffroy and Ledermann's method resolves itself, under the microscope, into long, radiated and, mostly, branching crystals (Fig. 7), which sometimes assume the shape of antlers, at other times resemble a horsetail (*Equisetum*).

Cinchonidia, $C_{20}H_{24}N_2O$, crystallizes from alcohol in shining prisms, or from more dilute solutions in lustreless white needles or laminæ, but in all cases in an anhydrous form. When perfectly pure it does not show fluorescence in a sulphuric acid solution, does not give the thalleioquin reaction, and deviates the ray of polarized light to the left. It is soluble in 1680 parts of water at 10° C.=50° F., 19.7 parts of 80% alcohol, 76.4 parts of ether (spec. gr. 729), and very readily in chloroform.

The *neutral* or *medicinal sulphate* has the composition: $2C_{20}H_{24}N_2O$, $H_2SO_4+6H_2O$. When anhydrous, it is soluble in 97.5 parts of water at 12° C.=54° F. The hydrated salt dissolves in 300 parts of boiling chloroform, and in 1000 parts of the same solvent at 15° C.=59° F.; in the latter case, however, the water of crystallization separates. This is the reason why sulphate of cinchonidia, when chloroform is poured over it, swells up to a jelly-like mass.

The microscopic appearance of a drop of a solution of this salt mixed with potassium sulphocyanide, according to Godeffroy's and Ledermann's method, is very characteristic, and may appear under any of the four forms illustrated.

(*To be continued.*)

Hydrophobia treated by Faradization.

M. Bouley, of Paris, used faradization in the case of hydrophobia occurring in a student, who had become accidentally inoculated with the saliva of a dog which had died of the disease. The period of incubation lasted three months, and the symptoms were intense. The employment of the faradic current, passed from the occiput to the soles of the feet, gave immediate relief so long as it was continued, and the patient was enabled to talk and drink, but death occurred suddenly on the fifth day from arrest of the heart's action.

SYRUP OF IODIDE OF IRON.

The difficulty encountered in preparing and preserving syrup of iodide of iron may be easily overcome by substituting, in the formula of the U. S. P., glycerin for syrup. It is unnecessary to heat the glycerin when the iodide of iron is added, but it may remain cold. This shortens the process very materially and simplifies it very much. The product is very stable and retains its color for a long time without the observance of the precautions necessary in the preservation of the syrup of the U. S. P. A specimen made January 1st has stood in an ordinarily lighted room in an ordinary flint-glass bottle up to the present time without showing any signs of decomposition whatever.

John E. Gregory.

Ill. Industrial University,
Champain, March 20, 1878.

Paper-Lint.

For a long time dentists have made use of bibulous paper, instead of cotton, as an absorbent of saliva and fluids which obstruct their operations, and more recently surgeons who make affections of the throat, nasal, and aural passages a specialty, have adopted the same material to absorb discharges, and hold medicated solutions for topical application. The latter have commonly used a fine quality of Chinese and Japanese cotton-paper in lieu of anything better to be had in the market. Of late, Messrs. J. Wyeth & Bro., of Philadelphia, have been furnishing a paper adapted to be used instead of patent lint for surgical and other purposes, which Dr. W. W. Keen has tried and describes in the *Medical Times*, as follows:

The article in question comes in sheets, about twelve by eighteen inches, and about as thick as patent lint, and consists of pure paper felt. In order to test the relative absorbent powers of the paper and the patent lint, I made a number of comparative experiments, of which the following may serve as a sample. A piece of patent lint weighing one hundred and thirty-three grains, and measuring five and one-half by nine inches, was suspended over a basin of water so that one inch of it hung in the water and eight inches out of it. In eighteen minutes it was completely wet, and weighed six hundred grains, a gain of four hundred and sixty-seven grains, or three and one-half times its own weight. A piece of patent lint of the same weight, but measuring nine by nine inches, was similarly suspended, and after five hours it weighed only three hundred and sixty grains, a gain of two hundred and twenty-seven grains, or one and three-fourth times its own weight; only the part in the water was really wet, and for about two and one-half inches farther up it was damp, the remaining five and one-half inches being dry.

As to cost, the paper lint is vastly cheaper. If regard be had only to weight, a roll of patent

lint weighs about twelve and three-fourths ounces, and costs one dollar and sixty cents, or about twelve and one-half cents an ounce. A pound of paper lint, sixteen ounces, costs fifty cents, or about three cents an ounce. In regard to surface-cost (and in practice this is the one to be chiefly considered) a similar disproportion exists. A roll of patent lint measures five yards by fifteen and one-fourth inches, or as nearly as may be nineteen square feet, at one dollar and sixty cents, which is eight and one-half cents per square foot. Paper lint varies somewhat in the number of sheets to the pound, but eleven sheets (twelve by eighteen inches) are about an average, which would give sixteen and one-half square feet, at a cost of fifty cents, or about three cents per square foot. In other words, patent lint is over four times as costly per ounce, and nearly three times as costly per square foot.

Put to test of practical experience in my wards at St. Mary's Hospital, it has given great satisfaction, and is immensely superior in most respects to the patent lint. As an absorbent it is so far superior that there is no comparison between the two. As a means of applying moist dressings, such as lead water and laudanum, warm or cold water, and other solutions, it answers as well as ordinary lint except in one particular,—it tears too easily. To remedy this I have suggested to Messrs. Wyeth that a sufficient number of cotton or linen threads be added to the pulp to give it greater tenacity, and when this is done it will be better than the ordinary lint. For salves and other dry dressings on even or moderately uneven surfaces, it answers admirably, but on very uneven surfaces, as the ends of some stumps, it is not so pliable as patent lint and does not so readily adapt itself to the inequalities of the surface. I have also used it for belladonna plasters, etc., with good success. If, however, the plaster is so stiff as to require considerable rubbing, it is apt to scale off in layers, a defect which I suspect the linen or cotton threads above alluded to may very probably remedy.

Once that the proper tenacity, softness, and thickness are attained, it is easy to see to what excellent uses it may be applied. It can be impregnated with carbolic acid, salicylic acid, chloral, or other antiseptics, and used dry or wet; with astringents and hæmostatics; and coated with rubber on one surface will answer admirably for light poultices. I have so used it, covered with waxed paper, with excellent results. This waxed paper, I may say in passing, I introduced into St. Mary's Hospital some years ago, and it has almost entirely replaced the more expensive and scarcely more useful oiled silk. It is prepared in the hospital from French tissue-paper in sheets, and is of excellent quality and very cheap.

Since using the samples of paper sent me by Messrs. Wyeth, I have tried a similar article made by John Huffnagle, of New Hope, Bucks County, Pennsylvania, and have obtained about equally satisfactory results both as to absorbent power and cheapness. This is already prepared for poultices and other wet dressings where evaporation is to be prevented.

I have also lately tried some patent lint and canton flannel, made absorbent or hygroscopic, by Hance Bros. & White. While far better than similar ordinary articles, neither was equal to the paper lint. The paper lint either absorbed more quickly, or, what is far more important, absorbed much more in proportion to its own weight, as the following experiment shows. A piece of paper lint, five and one-half inches square, weighing fifty-two grains, suspended partly in water as before, was wholly wet in seven and one-half minutes, and weighed three hundred and eight grains, a gain of two hundred and fifty-six grains, or five times its own weight. A similar-sized piece of hygroscopic patent lint weighed thirty-three grains, was wetted in twenty minutes, and weighed two hundred and one grains, a gain of one hundred and sixty-eight grains, or five times its own weight. A similar-sized piece of hygroscopic canton flannel weighed ninety-two grains, was wetted in twenty-one minutes, and weighed two hundred and ninety-nine grains, a grain of two hundred and seven grains, or two and one-fourth times its own weight. The cost of the hygroscopic patent lint is, I presume, somewhat more than that of the ordinary article.

Caladinum Seguinum or Dumb Cane.

THE arum-family (*Aroideæ*) contains a plant indigneous to South America, the West Indies, and Southern United States, which is considered by some to be one of the most poisonous members of the vegetable kingdom, although it is sometimes even cultivated in gardens. It is the so-called Dumb Cane, or *Dieffenbachia seguina* Schott (*Caladium seguinum* Vent., *Arum seguinum* L.). Its stem attains a height of 3 to 7½ feet, the leaves being attached to its upper part in shape of a crest. The latter are oblongly-ovate, pointed, and covered with white speckles. The spathe has a pale-green color and is shorter than the spadix, which bears flowers exhaling a cadaverous odor.

The juice of the fresh plant is exceedingly acrid and caustic, so that even very small quantities of it, carried into the digestive apparatus, produce inflammation and dangerous intoxication. It makes indelible stains upon linen, and might be used as indelible ink, if it were less poisonous. It is said that if cattle accidentally bite the leaves, their tongues swell up and their fauces become inflamed. It is therefore necessary to use proper caution in crushing the leaves or expressing the juice for pharmaceutical purposes. A single drop sprinkled upon the skin

produces an intense itching and burning, and afterwards inflammation. Some persons are more susceptible to its effects than others, and one case is on record in which a drop, spattered on the cheek, although immediately wiped off, produced an erysipelatous inflammation of one side of the face, so as to seriously endanger the life of the individual. The attack was followed by a herpetic eruption.

The rhizome seems to contain a more diluted juice, and has been recommended by American physicians as a remedy in pruritus vaginæ, in form of lotion prepared by adding from 15 to 20 drops to a teacupful of water.

It is, however, remarkable that the tincture exhibits the peculiar acridity of the fresh juice only in a faint degree. The reason of this is, that the fresh juice contains small microscopic crystals (raphides), perhaps an oxalate, which pierce the pores of the skin and set up an inflammation. Alcohol does not dissolve these crystals, and only a small proportion of them apparently pass through the filter. Hence, it follows, that by filtering the tincture through thick paper or through a multiple filter, these crystals are entirely removed, and with them all trace of acridity. This perhaps explains that some physicians have found it to render good service in pruritus, while others found it inert. It may also be that the original recommendation of its use in this complaint is due to the principle "similia similibus curantur," as the juice is intensely irritating. Scholz, who first used it, administered the tincture in doses from 2 to 6 drops. This tincture is prepared by macerating 10 parts of the fresh leaves and flowers, previously bruised with the greatest care, with 12 parts of alcohol of 90%, and expressing. The maximum single dose would be about 0.6 grammes or 15 drops, and the highest daily dose about 1.5 grammes or about 40 drops. It may perhaps be best given in the form of the mixture, known as

MISTURA ANTIPRURITICA, SCHOLZ.

℞ Tinc. Caladii seguini. ...0.6–1.5 gm. (16 to 40 gtt.)
Aquæ destillatæ..... 150 gm. (5 fl. oz.)
Syrupi..... ..... 30 gm. (6 drach.)
M. A tablespoonful every hour.

Viscum Album as an Oxytocic.*

Dr. Wm. H. Long, of Louisville, says that for ten years he has used the mistletoe as an oxytocic, having been led to do so from observing that farmers, in the part of the country where he formerly had practiced, were in the habit of giving mistletoe to such of their domestic animals as failed to "clean themselves," or expel the placenta after the delivery of their young. In 1857 he first used an infusion in the case of labor, in which the second stage was delayed through inefficiency of the uterine action. Contractions followed in twenty minutes. He has since used it in decoction in a large number of cases, and does not recall an instance of its having failed to stimulate the uterus to contract.

He believes in its superiority to Ergot—

1. Because it acts with more certainty and promptness.

2. That instead of producing a continuous or tonic contraction, as ergot does, it stimulates the uterus to contractions that are natural, with regular intervals of rest. Consequently it can be used in any stage of labor, and in primiparæ where ergot is not admissible.

3. It can always be procured fresh, does not deteriorate by keeping, and is easily prepared.*

He has used viscum in many cases of menorrhagia and hemorrhage from the uterus with gratifying results, and has taken pains in such cases to give ergot and mistletoe a competitive trial, with the object of testing their relative merits; he unhesitatingly pronounces in favor of the latter. Indeed, cases in which ergot given in powder, decoction, and fluid extract failed to give any relief, the viscum acted promptly.

In post-partum hemorrhage, the results have been no less satisfactory than in labor and menorrhagia, firm contractions of the uterus being secured in from twenty-five to fifty minutes after administering from one to two doses of the mistletoe.

According to Dr. Long, the remedy may be administered either as an infusion, tincture, or fluid extract, but he considers the latter to be the most convenient. The former he directs to be made by taking two ounces of the dried, or four ounces of the green leaves; pour on these one pint of boiling water, cover closely, and allow to stand until cool enough to drink. Two or four ounces may be given at a dose, and repeated in twenty minutes if necessary. The green leaves impart a disagreeable taste that is lost in the process of drying.

He has also used an alcoholic tincture made by taking eight ounces of the dried leaves and saturating them with boiling water, and adding alcohol to make one pint; but he does not think this as efficient as either the decoction or fluid extract. It should stand ten days before ready for use. Viscum makes a nice fluid extract of a

**V. flaviscens*, Pursch., *V. verticillatum*, Nuttall, *V. album*, Walter.

* Dr. King, in *The American Dispensatory*, 10th ed., p. 861, says: "This parasitic shrub is found growing on various trees; but that which is found on the oak is preferred. The bark and leaves have an unpleasant odor and a mawkish, bitterish taste. The proper time for collection is in November, when it should be gradually dried, pulverised, and kept in a well-stoppered bottle. It should never be kept more than a year, as age impairs its active qualities. The mistletoe growing on the water or black elm (*Ulmus nemoralis*) and on the water-oak (*Quercus aquatica*) is reputed to possess the most energetic medicinal virtues. . . . This plant is by no means inert, and its failures in the hands of some practitioners must be attributed to the want of proper doses, or to the employment of an article which age or exposure to the air had injured. The powder is best given in an infusion of valerian.

dark-brown color, which possesses all the virtues of the parasite.

The best time for gathering the mistletoe is in November, after a few frosts have fallen, and before the sap freezes, though it may be gathered and used at any period of the year. When gathered, it should be at once spread out to dry, as it will mould in a very short time if kept in a box or sack. It is best to dry it in the shade.

Viscum abounds in the western country, and is found in greatest quantities on the walnut and elm trees, though it grows sparingly on a few others, as the red and black locust, oak, etc. So far as Dr. Long is aware, there is no difference in its properties or strength made by the kind of tree on which it grows.

The Preparation of Curare.

Dr. Jobert gives the following description of the preparation of curare by the Tecuna Indians at Calderao (Brazil), near the Peruvian frontier. The principal elements of the preparation are:

1. *Urari uva*, a climbing plant (*Strychnos Castelnæ* of Weddell?).

2. *Eko* or *Pani du Maharáo*, a climbing plant, having the characteristics of the Menispermaceæ (*Cocculus toxiferus* of Weddell?).

3. *Taja* (a plant belonging to the Arum family).

4. *Eoné* or *Mucura-ca-ha* (*Didelphys cancrivora?*) which has the appearance of an amaranth.

5. *Three Piperaceæ* (of the genus *Artanthe*?).

6. *Tan-ma-gere* or *toucan's tongue*.

These plants have all been photographed by Mr. Jobert, who also brought back specimens of them.

The poison is prepared as follows:

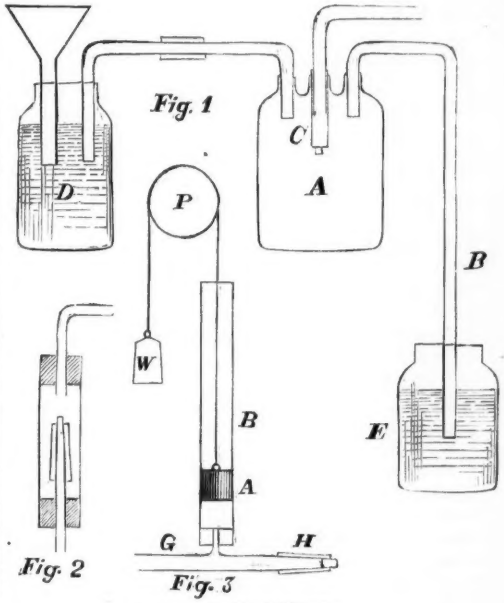
The first bark from the branches of the urari and eko is scraped very fine, and mixed in the proportion of 4 parts of the former to 1 of the latter. This mixture is rubbed up in the hands and then placed in a palm-leaf funnel, and exhausted with cold water, which is run though it seven or eight times until it becomes red.

This liquid is then boiled with fragments of the stems of the *taja* and *mucura* for six hours or until it thickens, after which the scrapings of the *Piperaceæ* are added and it is again boiled. When it cools, it has the consistence of thick blacking.

M. Jobert experimented which each of the constituents of the preparation separately, and found that the urari and taja were the most active.—*Bulletin de Thérapeutique, Feb.* 1878.

Apparatus for Rapid Filtering.

To one of the necks of the Woulff bottle, A, Fig. 1, is attached a glass tube, B, about ½ an inch in diameter, and from 3 to 6 feet long, dipping below in a jar, E, containing water. The middle neck carries a tube, C, which is an inverted Bunsen rubber valve (shown in Fig. 2), described in New Remedies, 1878, p. 77. The third tubulure connects the Woulff bottle with the flask D, which carries the funnel. A rubber connector between the two enables the operator to empty the filtrate, wash the precipitate, cleanse the flask D, etc. By suction with the mouth at the tube C, a pressure of from 1 to 2 lbs. on the square inch may be obtained, as shown by the rise of the water in the tube B, and can easily be kept within certain limits.



Apparatus for Rapid Filtering.

By the addition of the following, the pressure, as indicated by the water column D, Fig. 1 (or other suitable manometer), may be kept uniform. B, Fig. 3, is a glass tube at least an inch in diameter, to which is fitted a weighted solid plunger piston, A, more than counterbalanced by the weight W. The lower end of the tube B is connected to one of the arms of the "T" or "Y," G. Another of these arms terminates in a rubber valve, H (as above), opening outward, and the third arm is connected with the tube C, Fig. 1. When the weight W is lifted, the piston sinks, the air being driven out at H, and the subsequent rise of the piston creates a pressure which may be modified by the addition or subtraction of small weights from W. The valve C in Fig. 1 prevents the fall of the water-column, etc., when it is necessary to raise the weight W.—Robert C. Hindley, *in the Scient. Amer. Suppl.*

On the Use and Administration of Fat.

In an article under the above title by the Editor of *The Practitioner* (Dr. T. Lauder Brunton), the following practical suggestions are made:

"Whatever the fat may be which we wish a person to swallow, we should endeavor, by every means in our power, to subdivide it minutely, if there be the least difficulty in digesting it. Besides this, we ought to seek to maintain this state of subdivision in the stomach. For, although the fat may be finely subdivided at the time it is swallowed, yet during its sojourn in the stomach it may be melted by the warmth of the body, and the globules gradually agglomerating, may again form a solid mass, which will have somewhat the same effect upon the stomach as if it had been swallowed in a solid mass at first. For this reason I think it is advisable, in administering cod-liver oil, to give it an hour or so after, instead of immediately after a meal; because it will then have a shorter time to stay in the stomach, and will pass out quickly into the duodenum.

I think it is better to give cod-liver in the form of an emulsion with gum acacia, rather than with solution of potash or carbonate of potash, because the gum is little, if at all, affected by the gastric juice, whereas the potash will be neutralized, and its emulsifying properties destroyed, so that the particles of oil can again run together. This emulsion with gum acacia is borne by many persons who cannot take pure cod-liver oil, and with whom the potash emulsion also disagrees.

Besides the differences in the digestibility of fat due to the mechanical condition of aggregation or subdivision, there are differences also which are due to their chemical composition. Thus, mutton fat is difficult of digestion, while pork fat is easily digested. Butter, too, can be readily taken, and is greatly enjoyed by some persons who cannot take other sorts of fat; and cod-liver oil is usually very well borne, and very easily assimilated. Many opinions have been advanced regarding this ready digestibility of cod-liver oil, and some have sought for its cause in the fact that this oil contains propylene in combination with fatty acids instead of glycerin, like most other fats.

Others, again, have attributed it to the minute quantities of iodine, and others to the biliary matters which are found in the oil. The last seems by far the most reasonable supposition. For it has been shown by Neuman that oil of any sort will pass much more readily through a filter, or through an animal membrane moistened with bile, than through one moistened with water. This is still further borne out by the fact which the late Dr. Hughes Bennett used to mention in his lectures, and which has recently been confirmed by the observations of my friend Dr. Russell, that the coarser kinds of cod-liver oil, though more disgusting to the taste, are sometimes more easily digested than the paler and so-called better qualities.

These coarse oils are obtained from livers which have been longer exposed to heat, and contain more of the biliary substances. But it is not improbable that the peculiarity in the chemical composition of the oil which I just now mentioned may have also something to do with its digestibility and utility. The remark of the old nurse quoted by Weir Mitchell, that cod-liver oil fat was soon squandered, seems to point to the greater mobility, if we may so term it, of the cod-liver oil than of other fats, so that it is both more readily laid on and more readily reabsorbed from the tissues than other fats. Perhaps it is to this greater mobility that the beneficial effects of cod-liver oil, as compared with those obtained from the use of other fats, such as butter, are to be ascribed.

Therapeutic Use of Iodoform.

In the *British Medical Journal*, Mr. Berkley Hill gives his experience in the use of iodoform, both as an external application and internally. In the form of powder and ethereal solution (1 to 6) he has applied it for three years to venereal ulcers. The discharge rapidly lessens, pain subsides at once, and the sore is well in a week or ten days. He avoids using it on inflamed sores or on simple granulating wounds; but indolent non-specific ulcers are also rapidly improved by its use.

He finds the internal use of iodoform very beneficial. It acts more rapidly than potassic or other iodides and is equally well borne. He gives it with extract of gentian in pills containing 1½ grains. Three pills daily are at first given, and increased to eight or ten in twenty-four hours. The affections in which he has thus employed it are obstinate syphilitic ulceration of the tongue, three cases of which were remarkably improved; ulcerating gummata, and syphilitic pericranial and cranial disease.

In a subsequent number of the same journal, Mr. Windham Cottle indorses Mr. Berkley Hill's remarks regarding the usefulness of the remedy, and adds a number of practical hints in relation to its employment.

It is sparingly soluble in water and glycerine, more soluble in alcohol and warm oil, but readily soluble in ether, and to a still greater degree in chloroform. Two years ago, Mr. Cottle made solutions of iodoform in alcohol and ether, but as the liquid became of a dark iodine tint, he feared that some substitution product had formed, or decomposition taken place, and subsequently used warm oil as a solvent. When made into an ointment with lard or vaseline, its odor can be somewhat disguised by the addition of some essential oil—such as that of almonds. As a powder, it may, if requisite, be diluted with Fuller's earth, magnesia, or tannin; the last mentioned body having the property of removing its offensive odor to some extent.

Mr. Cottle gives a résumé of the uses he has made of the remedy in venereal sores, buboes,

syphilitic ulcerations, chronic ulcers, and as a parasiticide in ringworm of the scalp, chloasma, and sycosis. In the last-mentioned affections its use was beneficial, but its odor prevented its employment in most cases.

In the same number of the *Journal*, Mr. Lenox Browne adds his indorsement of what Mr. Hill has said on the value of iodoform as a therapeutic agent, and recommends it as a local application in subacute and chronic inflammations of the naso-pharynx. He applies it in two ways, first as an ethereal solution (1 to 10 or 12) with a brush, sponge, or with cotton-wool; the throat being first treated, and then the remedy applied to the nasal passages. Only momentary discomfort is produced during the evaporation of the ether. After the application, which should be repeated twice or thrice a week, the mucous membrane appears paler and is covered with a thin film of iodoform. After about six repetitions, the swelling of the membrane will have been much diminished. The second method, consisting in the admixture of the remedy with vaseline and its application by means of a brush, may be intrusted to the patient. This may be done night and morning, or on the alternate days of the stronger application. Five to eight grains of iodoform, with sufficient ether to dissolve it, may be added to one ounce of vaseline. Mr. Browne acknowledges his indebtedness to Dr. R. C. Brandies, of Louisville, Ky., for the suggestion of the remedy.

Dr. Edward Woakes (*ibid.*) says that "in rhinitis, ozæna, post-nasal catarrh, and hyperplastic deposits, whether simple or syphilitic, iodoform exercises quite a specific influence." He finds the painfulness of the ethereal solution its chief objection when applied to the nasal cavity (although allowing the ether to evaporate somewhat from the sponge will lessen the irritant effect), and has been in the habit of using an "iodoformed wool" made by Messrs. Bullock & Co., and containing a drachm of iodoform in a corresponding weight of wool. In using the latter, a small pledget may be passed into the nasal cavity, where it may be allowed to remain from one hour to twenty-four hours.

Dr. C. A. Bryce, of Richmond, Va., in the *Louisville Med. News* of March 2d, reports three cases of severe venereal ulcerations [probably chancroidal], in which the free application of the remedy put a stop at once to destructive progress and established reparative action.

Dr. Prosser James (*ibid.*) supports Mr. Hill in his estimate of the value of iodoform when used internally, although he has never used it in such large doses. As an application to the fauces and nasal passages, he prefers the remedy in fine powder to the ethereal solution, and when using it in this manner, does not consider it necessary to give it in form of pill, since some of the powder is very likely to reach the stomach, and produce constitutional effects. He finds iodoform of equal value in strumous as in syphilitic ulcerations.

The Doctor quotes from *La Independencia Medica* the recommendation by Dr. Julian Alvarez of the use of iodoform in blennorrhagic orchitis as superior to belladonna, opium, conia, or other alkaloids. He applies it in the form of ointment made of one or two parts of iodoform in thirty of vaseline.

Preparation of Pure Resin of Scammony.

Resin of scammony is usually prepared by making a strong alcoholic tincture of powdered scammony, and pouring it into water; the coloring matter may partially be removed by passing the tincture through recently ignited animal charcoal. Mr. E. Perret has, however, found that this coloring matter is in combination with alumina and lime, and that the whole may easily be converted into an insoluble lake, by adding a little sulphuric acid to the tincture. He recommends to exhaust powdered scammony with boiling alcohol, which yields a dense, black, resinous, and alkaline tincture. On now carefully adding a few drops of sulphuric acid, until the liquid has a neutral reaction, the colored lake separates, settles to the bottom, and the supernatant tincture is colorless. This is then filtered, and the filtrate deprived of alcohol in a distillatory apparatus. The residue is dried on a sand-bath, which takes place very rapidly by gradually raising the temperature to 102°C. (215.6°F.). After cooling it is reduced to powder. This is said to yield a very pure, white, and dry resin.—

It is very probable that the product obtained by this process still contains matters soluble in water, and that it is, therefore, not a pure resin. By pouring the residue obtained after the distillation into water, and then drying and powdering the precipitate, a purer substance would no doubt be obtained.—Ed. N. R.

Hypodermic Injection of Silver Nitrate.

In obstinate neuralgic affections, particularly in ischias as well as in other painful complaints, such as arthritis, hypodermic injections of silver nitrate are recommended by Le Dentu. Two to three drops of a strong (1 : 5) solution constitute one dose, which is followed by considerable pain, and in three or four days by an abscess, while the original pain has nearly always disappeared. These abscesses, after having been opened, heal rapidly in four or five days. He prefers this method to the employment of Vienna paste, the actual cautery, or other caustic applications.—*L'Union méd.*

RECENT PAPERS.

Zeitschrift des Oesterr. Apoth. Vereins. Nos. 5–7.

T. F. HANAUSEK: "Quinchonchos." [The seeds of *Cajanus Indicus* Spreng., known also as "*embrevade* or *Angola-peas*." The Indian bean-bush or wool-bean is a papilionaceous plant, native of East Indies, but cultivated in tropical America. The seeds resemble peas, being, however, only about half the size and somewhat flattened on one side; the color is dirty grayish-yellow, with a few small, irregular, dark-brown spots, particularly near the hilum. They are chiefly used as food; the root and twigs are said to be used medicinally in Eastern Asia.*]

WIESNER: "On Phloroglucin as Reagent for Woody Fibre." [Pyrogallic acid, pyrocatechin, and resorcin have the property of coloring woody fibre previously moistened with hydrochloric acid; the first imparts a faint grayish-blue, the two latter a blue-violet tint. A better reagent is aniline sulphate; but the best appears to be *phloroglucin*, a product of the decomposition of phlorizin, which exists in the root-bark of the apple, cherry, pear tree, etc. On moistening woody cell-tissue with hydrochloric acid and applying an alcoholic solution of the extract of cherry root-bark, the tissue is colored intensely reddish-violet.]

——: "On Potomine." [Selmi has extracted from dead human bodies, which had been interred for some time, a very poisonous alkaloid, which he termed *potomine*. Morrigia and Battisteni have since ascertained that this is accompanied by other highly poisonous bodies, which may be extracted by amylic or ethylic alcohol.]

T. F. HANAUSEK: "Oil of *Melia Azedarach*." [In Eastern Asia two kinds of oil are prepared, one from the fruit and the other from the seeds. The former is used in chronic skin-diseases and in hysteria; the latter only for burning. The former is solid at ordinany temperature, and melts at 95° F.]

SAME: "Oleum Infernale (East Indian)." [This is the oil of the seeds of *Curcas purgans*, native of Cuba and New Granada, but cultivated in all tropical countries. The seeds are known as: *Nuces catharticæ Americanæ, Semina Ricini majoris, Semen Curcadis, Ficus infernalis, Nuces Barbadenses, physic nut, pinhoë de purga, gros pignons d'Inde*. The oil is a powerful drastic purgative, and occasionally shipped to England, where it has been used to adulterate croton oil.]

Archiv der Pharmacie. January and February.

OSC. FICINUS: "On Soluble Saccharate of Iron." [The preparation of this compound on the large scale is somewhat difficult, as the settling of the precipitate and its washing consume a great deal of time. The mixture of 1 part of solution of ferric chloride, 1 part of syrup, and 2 parts of solution of soda (spec. gr. 1330), instead of being poured into 15 parts of boiling hot water, as the Germ. Ph. directs, should be poured into a quantity of 90 per cent alcohol, amounting to 3 times its bulk. The resinous-looking precipitate, after the removal of supernatant liquid, should be repeatedly stirred up with alcohol, and finally dried with 9 parts of sugar; when dry, rubbed to powder with 10 more parts of sugar, and preserved in well-closed bottles. The alcohol, of course, can all be recovered by distillation.]

F. A. FLUECKIGER: "Indifferent Resin from Gurjun Balsam." [During the manipulation of large quantities of gurjun balsam by a large German manufacturing firm (Gehe & Co.), crystalline crusts were obtained in the residue of the distillation, which were denominated (incorrectly) copaivic acid, as gurjun balsam is used as a substitute for copaiva. The purified crystals were found to be optically inactive, to possess no acid properties, and to have a composition corresponding to the formula $C_{28}H_{46}O_2$. It is an indifferent resin.]

G. DRAGENDORFF: "On *Add-add*." [This is the Abyssinian name of the leaves of *Celastrus obscurus*, nat. fam. Celastraceæ, which is used as a remedy in Abyssinia against the so-called *kolla* disease. This is a contagious disease, generally attacking foreigners in the interior of Abyssinia, characterized by great bodily heat, head and back-ache, depression of spirits, and cardiac disturbances, perhaps of a malarial type, which often ends fatally at the end of the third week, unless speedy relief is afforded. Although quinia has been found to be a good remedy in these cases, a decoction of *add-add* has been found to be the most serviceable. The active principle of the drug appears to be a bitter non-nitrogenized glucoside.]

Berichte der Deutschen Chem. Ges. No. 3.

A. W. HOFMANN: "On the Nature of Reichenbach's Cedriret." [The body which Reichenbach found in beech-wood-tar creasote, and which he termed cedriret (from *cedrium* "tar-water," and *rete* "the net," because the crystals shoot out in net-form), and which was studied a few years ago by Liebermann, who gave it the new name *cærulignon*, has been ascertained by Prof. Hofmann to be the dimethylic ether of pyrogallic acid: $C_6H_{10}O_3$ or $C_6H_3 \cdot OCH_3 \cdot OCH_3 \cdot OH$. The correctness of the result was proved by the artificial production of cedriret from pyrogallic acid.]

American Journal of Pharmacy. March.

E. SCHEFFER: "Liquor Ferri; Dialyzed Iron; Catalytic Iron, etc." [The experiments of the author prove: 1. That the preparation of a perfectly pure ferric hydrate is very difficult or almost impossible as it is apt to contain either chlorine or ammonia. 2. The precipitate of oxychloride of iron is soluble in pure water, and in its more basic combinations it is only soluble when free from saline compounds. 3. A solution of very basic oxychloride may be prepared without dialysis, and the product may be made to contain less chlorine than is found in the best commercial samples of dialyzed iron.]

C. L. MITCHELL: "Soluble Medicated Bougies." [The author states that he has commenced the manufacture of these bougies by a method of his own, using for their composition a mixture of glycerine and gelatin. The mass made in this manner is suitably medicated, and then, while quite hot and liquid, poured into moulds, being a series of grooves in two plates of brass hinged together, somewhat on the style of caustic moulds.]

G. W. KENNEDY: "Poisoning by Potassium Chloride." [Detailing the case of a child, which had eaten about half an ounce of the salt, in consequence of which violent vomiting set in after some time, producing gastritis, collapse, and death, seven hours after the salt had been taken. A peculiar symptom observed was the strong inclination of the child to slumber, it being in a lethargic condition from the time it was first noticed until it expired.]

Repertoire de Pharmacie. No. 2.

GIFFARD: "Castor Oil Soaps or Ricinoleates." [The soaps obtained by saponifying castor oil with an alkali, or by double decomposition between an alkaline ricinoleate and a metallic salt, may be used with advantage for various purposes. *Ricinoleate of sodium* or *potassium* would form a good excipient for aperient pills. *Ricinoleate of magnesium*, obtained by decomposing an alkaline ricinoleate with magnesium sulphate, is a mild agreeable laxative. *Ricinoleate of iron* suggests itself as likely to be a combination free from the usual constipating effects of other iron salts. *Ricinoleate of mercury*, a white precipitate of rather firm consistence, may prove serviceable for endermic applications.]

Journal de Pharmacie et de Chimie. Nos. 2-3.

CAILLETET: "The Liquefaction of Acetylene." [*Acethylene*, or *Ethine*, C_2H_2, a gas produced in various ways, best by passing the vapor of chloroform over ignited copper, has hitherto resisted all attempts to liquefy it. Mr. Cailletet, however, has succeeded in accomplishing this feat by means of the same apparatus used by him in the liquefaction of oxygen. At 1° C. it requires 48 atmo-

* The Hindu physicians use a pulp made of the twigs and leaves as an external application (poultice) to swellings. The plant is called *Ádhakí* in Sanskrit, *arar* in Bengali, and *tor* in Hindustani.—Ed. N. R.

spheres; at 10° C., 63 atm.; at 25°, 94 atm.; and at 31°, 103 atm. It forms a colorless, very mobile liquid, lighter than water, which dissolves it. It is a solvent of paraffine and fats.]

EDME BOURGOIN: "Solubility of some Organic Acids in Alcohol and Ether." [The author has examined the below-named organic acids as to their solubility in alcohol of 90 per cent, absolute alcohol, and ether:

Acids.	*Ether.*	100 parts of *Absolute Alcohol.* Dissolve parts.	*Alcohol 90 per cent.*
Oxalic.....	1.266	23.73	14.70
Succinic.....	1.265	7.51	12.59
Tartaric.....	0.400	25.604	41.135
Citric.....	2.26	75.90	52.85
Gallic	2.56	38.79	23.31
Benzoic.....	31.35	46.68	41.62
Salicylic.....	50.47	49.63	42.09
Phthalic.....	0.684	10.08	11.70

Boletin del Colegio de Farmaceuticos de Barcelona. No. 3.

DR. CANUDAS Y SALVA: "An Improvement of Marsh's Apparatus." [The author prevents the possible explosion of the apparatus, resulting from the ignition of the hydrogen before all the air has been expelled, by placing into the lateral exit tube two metallic meshes inclosing between them very loose cotton. Even when the gas is lit prematurely, no explosion is said to result.]

Pharmaceutische Centralhalle. Nos. 5–7.

AD. CARNOT: "Test for Potassium." [Dissolve one part of bismuth subnitrate in just sufficient hydrochloric acid, and two parts of sodium hyposulphite in a small quantity of water. Pour the latter solution into the former, and add alcohol to the mixture in large excess. Soluble potassium salts give a *yellow* precipitate with this reagent; insoluble or undissolved salts are colored yellow by it. This reaction is observed with all potassium salts, whether they be combined with organic or inorganic acids. Barium and strontium, however, give the same reaction, but they may be easily separated from it previously].

"Traffic with Diplomas." An announcement in a newspaper, offering to procure for applicants various university degrees, led Dr. Hager to trace the matter to the bottom, and he found the author to be a certain Dr. Olschowsky, 8 Ravensdon street, Kennington, Park Road, London, S. E. This person offers to procure the diploma of doctor in philosophy, medicine, law, theology, dentistry, chemistry, and even music, from "a highly respectable university in New England" (we hope not!) on certain very easily fulfilled conditions, the principal one of which appears to be a fee of 650 marks ($155). He adds that those applicants who cannot obtain a degree at this university, may obtain any of the above degrees through him from the "American University of Philadelphia," or the "Livingston University," for the sum of 500 marks ($119). Comments are superfluous!

Pharmaceutische Zeitschrift f. Russland. Nos. 1–4.

PROF. G. DRAGENDORFF: "Analysis of Rhubarb." [Prof. Dragendorff has made comparative analyses of 5 varieties of rhubarb: 1. *Russian* rhubarb of 1860 (not any more in the market). 2. Good *Chinese* rhubarb of 1877. 3. *Rheum palmatum* of Przewalsky, 1873. 4. *English* rhubarb of 1864. 5. *Siberian* rhubarb. The best commercial variety at present in the market is the *Chinese*, which was found to contain the following constituents: gum soluble in water, 1.58; arabic acid (?) soluble in water, not precipitated by alcohol, 6.43; metarabic acid, 570; pararabin (?), 2.10; starch, 6.20; cellulose, 7.64; sugar, 4.29; a substance soluble in water and absolute alcohol, perhaps a carbohydrate, 6.47; *cathartic acid*, 4.88; malic, etc., acids, 1.09; oxalic acid combined with calcium, 4.59; [free chrysophanic acid, *none*]; chrysophan and tannin, 14.17; emodin, erythroretin, phæoretin; blackish-brown crystalline resin soluble in alcohol and ether, 1.15; white crystalline resin soluble in ether, insoluble in alcohol, 0.70; fat, 0.15; albuminoids, 4.39 vasculose, lignin, etc., 10.90; water, 11.25. Prof. D. considers the principal active constituent to be the *cathartic acid*, a nitrogenous glucoside, which very much resembles that found in *Senna* and *Rhamnus Frangula*. The effect is no doubt modified by the tannin and chrysophan. English and Siberian rhubarb are particularly distinguished by the fact that they contain *free* chrysophanic acid which may be extracted with petroleum-ether, while the other three varieties contain none, or, at most, only faint traces. Prof. D. thinks that admixtures of English (or Siberian) to good Chinese rhubarb could be detected by extracting the powder with cold petroleum-ether. Good rhubarb would yield a colorless percolate, while that mixed with the above sorts would, after standing a few days, give an intensely yellow percolate.]

Pharmaceutische Zeitung. Nos. 10-20.

DR. SOMMER'S HERBARIUM. Dr. Sommer, an apothecary in Schwarzenfels, near Cassel, Germany, furnishes for a moderate price a very complete "*herbarium vivum medicinale*," containing the officinal (Germ. Pharm.) as well as obsolete medicinal plants, together with those which are occasionally used as substitutions or fraudulent admixtures. Each plant is represented as completely as possible by root, leaves, flowers, fruit; they are arranged in natural families, labelled with the botanical name, author, habitat, and more important synonyms, together with the German, English, and French terms.

"Dose of Salicylic Acid." Dr. Stricker in Berlin, in his official report on Salicylic Acid, designates as *single maximum dose*, the following quantities:

1 gramme (15½ grains), every hour, for young and robust rheumatic patients.

0.5 gramme (8 grains), per hour, for older and feebler patients.

0.25 gramme (4 grains), per hour, for children between 5 and 15 years.

FR. JOBST: "Spurious Quininia Tannate." [The well-known manufacturer of alkaloids, Mr. Fr. Jobst, states that there is offered in the market a so-called quinia tannate, at a price at which it is utterly impossible to make it. The Pharm. Germ. directs the salt to be made from 1 part of quinia sulphate and 3 parts of tannin. Such an (acid) tannate contains 32 per cent of quinia. Many commercial tannates, however, contain 22–26 per cent of alkaloids which are by no means pure quinia, but consist mainly of cinchonia and cinchonidia. Tannate of quinia is best examined in the following manner. One gramme of it is reduced to powder, well stirred up with fresh milk of lime, and the mass dried on the water-bath. The resulting powder is exhausted with chloroform, and the chloroformic solution evaporated in a beaker-glass. The residue, dried at 120°, indicates the total amount of alkaloids. A little water and a few drops of sulphuric acid are now added, sufficient to dissolve the dry alkaloids, the solution, if necessary, filtered, the filtrate mixed with 3 to 4 cub. centim. of ether and with ammonia in excess, and the whole well shaken. Both layers of liquid will remain clear if only quinia was present, while in presence of cinchonia or cinchonidia more or less of the alkaloids will remain undissolved, or at least will again separate.]

L'Orosi. January.

DR. LANGELI: "Adulteration of Pyrophosphate of Iron." [Stating that there is a spurious ferric pyrophosphate in the market, prepared by the following method: Into a warm solution of 390 grammes of sodium pyrophosphate in 420 grammes of distilled water, are poured 41 grammes of a solution of ferric chloride of the spec. gr. 1,525, diluted with 180 grammes of water, and the mixture is stirred. The precipitated ferric pyrophosphate separates first, but then redissolves and imparts a red color to the liquid. Having filtered it, a little absolute alcohol is added, which causes the precipitation of pyrophosphate of iron and sodium in white crystals, which are collected, washed with absolute alcohol, and dried on blotting paper.]

Pharmaceutical Journal and Transactions. 400–404.

A. W. GERRARD: "Examination of commercial Oil of Thyme, so-called Oil of Origanum." [Stating that the commercial oil of thyme (origanum), instead of containing 50 per cent of thymol, as some authorities assert, at present contains none at all, being probably removed before being sent to market, and that therefore the commercial oil appears to be nothing else than the hydrocarbons cymene and thymene.]

H. SENIER: "Croton Oil." [Finds that the solubility of croton oil in alcohol increases with age. Besides, that portion which is insoluble in alcohol is incapable of producing the characteristic eruption when applied to the skin. It follows that, for medicinal purposes, an oil extracted by alcohol, or separated by alcohol from the crude oil, would be preferable.]

E. M. HOLMES: "*Duboisia Myoporoides* R. Br." [Duboisia is a small tree or tall shrub, about twenty feet in height, occupying a position between the Scrophulariaceæ and Solanaceæ, but now included in the latter family. It is a native of Australia, and occurs also in New Caledonia and New Guinea. About Brisbane (Australia) it grows plentifully on the borders of vine scrubs, and springs up after the forest of timber has been burnt up. Dr. J. Bancroft has found that the extract of the leaves of this plant is a powerful mydriatic, almost equal to atropia in strength. It is now used at Brisbane and Sydney exclusively, for dilating the pupil, having entirely replaced atropia. It probably contains this very alkaloid or one very similar to it. Dr. Ringer is at present engaged in studying its therapeutic effects.]

W. DYMOCK: "Notes on Indian Drugs." [*Nelumbium speciosum*, local name Kamal. The lotus flowers are used as an external cooling application. The seeds are used as food.—*Capparis spinosa*, local name of root-bark Kabar. Caper bark is recommended in palsy, dropsy, and gouty and rheumatic affections.—*Portulaca quadrifida*, local Kurfa. The fresh leaves of purslane are used as a cooling astringent application in erysipelas, and an infusion of them is given as a diuretic.—*Garcinia Indica*, local Kokum. The fruit is largely used all along the western coast as an acid ingredient in curries, and is an article of commerce in the dry state. It is generally prepared by removing the seeds and drying the pulp in the sun; the latter is then slightly salted, and is ready for the market. The seeds are pounded and boiled to extract the oil, which on cooling becomes gradually solid, and is roughly moulded by hand into egg-shaped balls or concavo-convex cakes. This is the substance known as kokum butter; the natives occasionally use it for cooking, but the statement that it is largely used at Goa to adulterate ghee (liquid butter) is incorrect. The apothecaries of Goa prepare a very fine purple syrup from the fruit, which is worthy of attention.]

DR. EUG. BURI: "Elemic Acid." [Announcing the discovery in elemy of a third crystallizable constituent of an acid character, which the author names elemic acid. Its composition is $C_{35}H_{56}O_4$, being a monatomic acid.]

Bulletin General de Therapeutique. Nos. 1. 2. 3, 1878.

DR. CAMPARDON, FILS: "On the Use of *Lythrum Salicaria* Therapeutically." [An infusion of the leaves of this herb is a popular remedy for dysentery among the peasants in the environs of Lyons. The author obtained a quantity of the leaves and had an extract and a tincture prepared from them. He found them of service in dysentery, acute and chronic diarrhœa, etc. Their action is astringent and tonic.]

DR. LEYDEN: "The Therapeutic Effects of Chlorhydrate of Pilocarpine." [The author states that he has found this alcaloid of incontestable service in a great number of diseases, and especially in inflammation of the kidneys, both acute and chronic. He employs it hypodermically in doses of 25 milligrammes, giving one or two injections a day, according to circumstances.]

Prof. A. B. Prescott, of Ann Arbor, has recovered from the severe attack of pneumonia with which his life was recently threatened.

BIBLIOGRAPHY.

PRESCRIPTION WRITING. Designed for the Use of Medical Students who have never studied Latin. By Frederic Henry Gerrish, M.D., Professor of Materia Medica and Therapeutics in the Medical School of Maine, etc. Portland, Me.: Loring, Short, & Herrman. Philadelphia: J. B. Lippincott & Co., 1878. Small 8vo, pp. 51.

THE preface shows the desirability (which will be generally admitted) of a better knowledge on the part of many medical students and physicians with conventional modes of writing prescriptions than they at present possess, even if it be acquired only in an automatic way. The balance of the work is devoted to a consideration of the rules for writing prescriptions and to lists of the Latin words employed, with simple directions for forming their terminations. Instead of being a dry and uninteresting manual, it is a very readable little book, and full of pithy suggestions. It strikes us that a few copies would be a profitable venture for apothecaries whose patrons require a little coaching in this particular, and we are quite sure that the majority of advanced medical students need just the information to be obtained in this work, whether they are familiar with Latin or not.

AIDS TO BOTANY. By C. E. ARMAND SEMPLE, B.A., M.R.C.P. LOND., etc. London: Bailliere, Tindall & Cox, 1877. Sm. 8vo, pp. 56.

AIDS TO CHEMISTRY. Part I.—Inorganic: Oxygen to the Metalloids inclusive. By C. E. ARMAND SEMPLE, B.A., M.R.C.P., etc. London: Bailliere, Tindall & Cox, 1877. Sm. 8vo, pp. 64.

BOTH of these handy little books have been prepared for students. There has been no attempt to condense into either the elements of the sciences, but each one is composed mainly of classifications, definitions, and formulæ which every student is expected to commit to memory irrespective of information derived from more general study. They are carefully indexed, nicely printed, and well worthy of the favor of students of pharmacy and medicine.

ATLAS OF SKIN DISEASES. By LOUIS H. DUHRING, M.D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Philadelphia: J. B. Lippincott & Co., 1878.

PART III. *Eczema* (squamosum), *Syphiloderma* (erythematosum), *Purpura* (simplex), *Syphiloderma* (papulosum et pustulosum).

SUBSCRIBERS to this elegant series of plates will rejoice with us that the difficulties which have interferred with the publication of this third part have at length been overcome. We have already spoken in praise of the parts which preceded it, and we have no occasion to say less of this portion of the work. The drawing and coloring seem to have been done with the greatest care, and the text contains the history of the case of which each picture is a careful likeness, and such general observations as would naturally accompany it in order to convey desirable information about the special form of disease. Although they are somewhat smaller than natural size, the drawings are sufficiently large to enable the smallest details to be shown with distinctness and fidelity.

STUDIES IN PATHOLOGICAL ANATOMY. By FRANCIS DELAFIELD, M.D. Wm. Wood & Co, Subscriptions $5.00 a year; single numbers, 50 cents.

No. 1.—*The Pleura*:—I, Flat connective tissue cells from the fascia of a dog's leg, ×750; II., Branching connective tissue cells from the tendon of a dog's leg, ×15,000; III., Branching connective tissue cells from the mesentery of the rabbit, ×750.

No. 2.—*The Pleura*:—IV., Pleura of the dog, ×750; V., Endothelium and branching connective tissue cells from the pleura of a Dog, ×1,500; VI., Endothelium of Hu-

man Pleura, ×90; VII., Lymphatics of the Parietal Pleura of the Dog, ×90; VIII., Lymphatic Spaces and connective tissue cells from the Pleura of a Dog, ×750.

MANY attempts have been made of late years to publish a series of illustrations of the microscopic appearance of normal and diseased tissues, and photography has in most instances been the means adopted for the purpose; but the imperfections of the instruments employed, and the deficiencies of the process itself, have usually resulted in a confusing mass of light and shade which gave but a poor impression of the real appearance of the tissues themselves; and the illustrations have been of little value to those who most have needed them.

The author of this series is not only well known as an authority in what relates to histology, but his work, as evinced in the first two numbers of the publication, proves him to be an accomplished draughtsman. By employing lithography, not only is it possible to reproduce in great degree the color of the object, but an intelligent observer is able to define characteristic features, so that they are evident to the student, and leave out elements which are not essential to the constitution of the tissue, and which, by their presence in the illustration, would only cause obscurity.

As for the work here noticed, we do not remember to have seen anything better of its kind. The drawings are admirable, and the text sufficiently comprehensive. We hope that the venture will meet with the success which it surely deserves.

DOSE AND PRICE LABELS of the Principal Articles of the Materia Medica and Preparations used in the United States, with some Useful Hints and Formulas, and with Prominent Marks calling attention to all Active and Poisonous Articles. For the use of Druggists, Pharmacists, and Physicians. By C. L. LOCHMAN. C. L. Lochman and Haines and Worman, Allentown, Pa. 1877, pp. 96, 9x4 in.

These labels are intended to be cut from the book and affixed to the packages containing the articles specified. They offer an easy means for indicating the price at which the article may be sold, and other matters of importance. The habit of referring to the label, on each occasion of handling the package, would also serve to refresh the memory regarding the properties of the contents.

CODES OF MEDICAL ETHICS. Arranged and Compiled by C. Henri Leonard, A.M., M.D. Detroit, Mich., 1878. 8vo, pp. 16. Price 25c.

This contains in convenient form for reference, the Codes of Ethics of the American Medical Association, the American Institute of Homœopathy, and the National Eclectic Society. Dr. Leonard is the publisher as well as compiler.

ANNUAL ANNOUNCEMENT of the Medical College of the Pacific. Medical Department of the University (City) College, San Francisco, 1878.

EXPOSITION OF FACTS. By A. Y. P. GARNETT, M.D. Washington. 1878, 8vo, pp. 38.

Relates to a controversy which has taken place recently in Washington, regarding the alleged practice of Army Surgeons in giving their services to persons not entitled to them.

REPORT of the Senate Committee on Military Affairs on a Bill for the relief of William A. Hammond, late Surgeon General of the Army. Senate Report No. 102. 8vo, pp. 14. Published by the Government.

CONTRIBUTION TO THE ETIOLOGY OF EPILEPSY. By William B. Neftell, M.D. Extracted from the Transactions of the International Medical Congress. 8vo, pp. 11. Privately published.

"WHAT AM I?" A valedictory address to the graduates, delivered at the close of the forty-first session of the Med. Department of the University of Louisville, by J. M. BODINE, M.D. Privately published. 8vo, pp. 28.

ANNUAL ANNOUNCEMENT OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF BUFFALO for the session 1877–8, with catalogue of previous sessions. pp. 16.

THE NEW DEPARTURE IN MEDICAL TEACHING. A lecture delivered at the beginning of the course in Pathology and Practice of Medicine in the University of Michigan, Oct., 1877, by A. B. PALMER. 8vo, pp. 24.

DERMATOLOGY IN AMERICA: Being the president's address before the first meeting of the Am. Dermatological Ass'n at Niagara Falls, N. Y., September 4th, 1877. By JAMES C. WHITE, M.D. Reprinted from the *Archives of Dermatology*.

Received from the Author.

REPORTS OF EXAMINATIONS by the Insurance and Banking Departments of the State of New York. Made during the year 1877. Pp. 30.

SUICIDE NOT EVIDENCE OF INSANITY. A paper read before the Medico-Legal Society of N. Y. C., by HON. O. H. PALMER, of New York. 8vo.

CALENDAR OF THE UNIVERSITY OF MICHIGAN for 1877-8. Ann Arbor, published by the University. 8vo, pp. 156.

THE calendar shows an attendance of 1,230 students, of whom 69 are registered in the Department of Pharmacy; 296 in the Department of Medicine and Surgery; 73 in the Homœopathic Medical College; and 43 in the College of Dental Surgery.

NEW YORK EAR DISPENSARY. Seventh Annual Report of the Board of Trustees. Pp. 16.

TWENTY-FIFTH ANNUAL ANNOUNCEMENT of the Medical Department of the University of Vermont and State Agricultural College, Burlington, Vt., for the year 1878. Pp. 20.

BEITRAEGE ZUR ERMITTELUNG EINIGER HOPFEN-SURROGATE IM BIERE, von WILHELM MEYKE. An inaugural dissertation. Libau, 1878. Pp. 44, with tables. Privately published.

DIE ENTSTEHUNGSGESCHICHTE DES BERNSTEINS, erläutert mit Hülfe von Beobachtungen an Copalpflanzen. Dorpat, pp. 4.

RHABARBERANALYSEN, von DRAGENDORFF. Untersuchungen aus dem pharmaceutischen Institut in Dorpat. 8vo, pp. 13.

EIN BEITRAG ZUR KENNTNISS DER MUTTERKORN-ALKALOIDE. By THEODORE BLUMBERG, Dorpat, 1878. 8vo, pp. 45.

AN inaugural thesis for which, together with the three papers preceding it, we are indebted to Professor Dr. Dragendorff, of Dorpat, Russia.

ANALYSES OF PHARMACEUTICAL CHEMICALS AND PREPARATIONS.

We are now prepared to send samples for the June prize to such as may desire to compete for it. Answers must be received before the 20th of May, and be accompanied by a sealed envelope containing the name of the writer, and designated by a device or motto, which is also to be placed, instead of the writer's name, upon the report of the analysis.

Persons to whom a prize has been awarded are requested to send to the publishers the title of any book or books they may desire, not exceeding in the aggregate the value of $10.00.

The prize this month is awarded to C. D. COOKE, 6 *Cherry St., Cambridgeport, Mass.* ("*Carlos*").

THE April sample consisted of Dover's Powder of good quality, "Pulvis Ipecacuanhæ Compositus" U. S. P. By reference to the U. S. Pharmacopœia it will be seen that Dover's Powder should contain ten per cent of dry opium.

ten per cent of ipecacuanha, and eighty per cent of potassic sulphate.

Referring to the primary materia medica list, we find that the opium used in making all pharmacopœial preparations should contain at least ten per cent of morphia, hence Dover's Powder should contain one per cent of morphia.

The Pharmacographia of Flückiger and Hanbury states that ipecacuanha contains the alkaloid emetia, in amount not exceeding one per cent, while experiments made by T. M. Stewart seem to show that emetia is usually present in amounts from 1.8 to 2 per cent. (*Am. Jour. Pharm.*, Aug., 1876, p. 359.)

In view of these contradictory statements, it will be safe to assume that Dover's Powder should not contain less than 0.1 per cent, nor more than 0.2 per cent of emetia.

The general appearance, color, odor, taste, and other physical properties of this sample would lead any druggist to believe it to be Dover's Powder. Let us now see how we can prove qualitatively and quantitatively whether there have been any additions, substitutions, or omissions in its preparations. A thorough study of the two organic substances, opium and ipecacuanha, as to their microscopical and chemical peculiarities, will be indispensable. It will be impossible, within the narrow limits assigned to this article, to give more than a hasty notice of the more prominent constituents of Dover's Powder. The reader is referred for fuller information to the Pharmacographia, the Dispensatory, and other books of reference.

I. *Ipecacuanha* contains one to two per cent of emetia ($C_{28}H_{40}N_2O_5$) [Lefort]; the emetia is combined with ipecacuanhic acid ($C_{14}H_{18}O_7$) [Willigk], the salt thus formed being soluble in cold water and diluted alcohol.

This ipecacuanhic acid is a glucoside, i. e., it yields glucose when boiled with dilute mineral acids: with ferric salts it gives a greenish solution, changed to purple by ammonia; it does not precipitate dilute solution of lead acetate. It was formerly mistaken for gallic acid.

Powdered ipecacuanha also contains variable quantities of woody fibre, pectin, resin, gum, fat, albumen, sugar, and *starch*, in the woody portion about 7 per cent, in the root bark 30 per cent.

Several formulæ have been assigned to emetia, but the one given seems well authenticated.

Emetia is a yellowish, non-crystalline powder, sparingly soluble in cold water, ether, and ammonia, freely soluble in alcohol, chloroform, potassic and sodic hydrates, soluble in benzole and petroleum naphtha. It is removed from alkaline solutions by benzole, petroleum naphtha, or better by chloroform. From acid (sulphuric) solutions these solvents do not remove emetia. The direct tests for emetia are not very distinctive. Water solutions are precipitated by nitric acid, or by potassic nitrate. When excess of nitric acid is employed, the precipitate first formed changes in time to a brown mass uncrystallizable and soluble in water; a small amount of oxalic acid being formed.

Acidulated (sulphuric) solutions of emetia are precipitated by ammonia, by Mayer's solution of potassic mercuric iodide, by phosphomolybdic acid, by tannic and gallic acids, and by picric acid even in *strongly acid solutions*; this last a distinction from morphia, which is only precipitated in *neutral solutions* by picric acid.

With cold, concentrated sulphuric acid, a brown color; with concentrated nitric acid a yellowish resinous mass; with Frœhde's reagent (.01 grm. sodic molybdate in 10 cubic centimetres of concentrated sulphuric acid, freshly prepared), a *red* color, then a *green*.

II. *Opium*, when dried, contains morphia ($C_{17}H_{19}NO_3$) 3 to 20 per cent, average 10 to 12 per cent, meconic acid ($C_7H_4O_7$) combined with morphia, and possibly with some narcotina, 3 to 4 per cent, and narcotina ($C_{22}H_{23}NO_7$), mostly uncombined, 1.5 to 10 per cent. In addition there have been discovered in various grades of opium fourteen other alkaloids in quantities varying from a half ounce to the ton, to one per cent of the dry drug. Besides alkaloids, opium contains mucilage, pectous substances, albumen, sugar, wax, coloring matter, volatile oil (trace), lime salts, lactic acid, fragments of poppy capsules, etc. Opium contains no tannic acid nor starch, and should yield to cold water 55 to 66 per cent of soluble matter; this water solution usually contains all the morphia as meconate and no narcotina, or only a little. Good opium, when ignited, leaves 4 to 8 per cent of ash.

The presence of opium in a mixture is considered proven if morphia, narcotina, and meconic acid are identified. For separation and identification of morphia see March article. Narcotina is a weak base, forming salts easily decomposed, and, unlike the larger number of alkaloids, it is removed from *acid* solutions by ether and chloroform. Narcotina is insoluble in water, potassic and ammonic hydrates, nearly insoluble in petroleum naphtha, soluble in 3 parts of chloroform, 25 of benzole, 120 of cold or 50 of boiling ether, and in 100 parts cold 85 per cent alcohol. With concentrated cold sulphuric acid it gives a *yellow* color, becoming *purple* when warmed. With Frœhde's reagent it becomes green, yellow, reddish. Dissolved in concentrated sulphuric acid and treated with a small crystal of potassic nitrate, a deep *blood-red color* is produced. With strong nitric acid a *yellow* color. It is precipitated by all the usual alkaloid reagents.

Meconic acid ($H_3C_7HO_7$) is best removed from opium by precipitating a watery extract with lead acetate. The precipitate ($Pb_3(C_7HO_7)_2$) is washed, placed in pure water, and treated with hydrosulphuric acid. The lead sulphide is removed, the filtrate allowed to stand in a warm place until free from odor. Meconic acid gives with ferric salts a blood-red solution not decolorized by hydrochloric acid (distinction from acetic acid), nor by mercuric chloride (distinction from sulpho-cyanic acid), but bleached by excess of oxalic or phosphoric acids. Solutions of meconic acid are decomposed by boiling with formation of comenic acid ($C_6H_4O_5$), and CO_2. Meconic acid is precipitated from solutions by excess of hydrochloric acid.

Having these facts, let us now examine the sample first with the microscope, next chemically.

III. With a microscope of 375 diameters we see:

(*a*) Many irregular, angular, transparent fragments slowly soluble in water (Potassic sulphate).

(*b*) A few small, irregular, brownish masses, made up of very small cells, not colored blue by iodine (from ipecacuanha).

(*c*) A small number of irregular fragments, light colored, not colored by iodine, made up of vessels with small depressions on their sides (woody fibre of ipecacuanha).

(*d*) A considerable number of irregular starch grains of moderate and varying size, colored blue by iodine (from ipecacuanha).

(*e*) An occasional needle-shaped crystal (narcotina from opium), some large, transparent, irregular masses of gum, also a few large irregularr esinous masses (from opium or ipecac.)

IV. *Chemical examination.*

T. M. Stewart's process, given in *Am. Jour. Phar.*, Aug., 1876, p. 359, will here be given.

"Three grams of the powder were extracted with 85 per cent alcohol (the residue tested for adulterations); the dry residue from the alcohol dissolved in acidulated (sulphuric) water, filtering if necessary, and the narcotina removed by washing the acid solution with ether. After addition of excess of barium carbonate, the solution is now extracted with benzine (benzole, not petroleum naphtha), the residue from benzine being weighed as emetia (confirming by dissolving in acid water, and titrating with potassium mercuric iodide). The solution exhausted with benzine is washed with amylic alcohol (several portions), and the residue from evaporation of the amylic alcohol weighed as morphia (confirming volumetrically by potassium mercuric iodide after dissolving in acidulated water). The ether and amylic alcohol should be water-washed."

If Dover's Powder, by the above process, gives the proper amounts of emetia and morphia, if it leaves on ignition 80 per cent of pure potassic sulphate, and if a microscopical examination reveals no foreign substances, it may be considered good. It is not practicable to detect ipecacuanhic acid, but meconic acid, narcotina, morphia, emetia, and potassic sulphate can be detected and accurately estimated.

The prize this month has been awarded to "*Carlos.*"

The analyses of "*Colie,*" "*Davy,*" and "*Towanda*" were next in merit.

"*Deucalion.*" You failed to get morphia because chloroform extracts it only in slight traces from alkaline solutions; if you had used amylic alcohol you would have found it.

The next sample is not pharmacopœial, but is very often dispensed. Is it of good quality?

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue.*]

No. 324 (Washington, D. C.).—**Formula for a Havana Cigar Flavor.**—The most successful method is to use genuine Havana tobacco in the manufacture of the cigar.

No. 325. (*Ibid.*)—**How to Impart a Dark Color to Light Tobacco Leaf.**—Steeping the leaf in a decoction of tobacco is a plan which we believe to be adopted in some instances.

Nos. 326–327. — "**Washington.**"—Will the correspondent who sent us two queries in February under this cognomen, please send his name and address?

No. 328.—**Carbazotate of Ammonium.**—This is a compound of ammonia and *carbazotic* or *picric* acid, $NH_4C_6H_2(NO_2)_3O$, forming yellowish-red, shining, iridescent scales or columns, easily soluble in water, scarcely soluble in alcohol, *excessively explosive* when heated or struck with a hammer. It partakes of the therapeutic properties of picric acid and all other picrates, being considered a very prompt febrifuge as well as tonic. Owing to its excessive bitterness, it is usually given in pills. The average single dose is from ¼ to ½ grain repeated several times a day. It is quoted in New York price lists at 60 cents per ounce. It does not lose its strength by keeping.

No. 329.—**Violet Writing and Copying Ink.**—Mix 1 drachm of Hofmann's Violet (Trimethyl- (or ethyl-) rosaniline) with 1½ oz. of alcohol in a glass or porcelain vessel, and let stand for 3 hours. Then add 13 oz. of distilled water, and heat gently until all the alcohol is expelled. Having made up the bulk to 13 oz. with water, add 4 drachms of gum arabic dissolved in 13 oz. of water.—For copying ink, add 2 drachms of glycerine to every pint of the ink.—The soft aniline paste, which you say you have on hand, may be dried by spreading it on a plate of glass and exposing to a warm temperature.

No. 329.—**Black Ink.**—The number of formulæ for black ink is so great that they would fill a respectable volume. We have published an excellent formula on page 152 of our last volume; another good formula for a so-called "alizarine" ink is the following: Boil 10 parts of best powdered galls with 80 parts of water, until there are left 40 parts of decoction. Then dissolve 1 part of prime indigo in 4 parts of fuming (Nordhausen) sulphuric acid, mix the solution with 40 parts of water, and add to it 2 parts of clean and small iron filings, which will be almost completely dissolved by the acid liquor with the escape of hydrogen gas. Then add to the latter mixture 2 parts or a sufficient quantity of chalk, so that the excess of acid is neutralized, and allow the calcium sulphate and the excess of calcium carbonate to settle. Pour off the clear solution and mix it with the decoction of galls. Finally add 2½ parts of gum arabic dissolved in 5 parts of water.

No. 330.—**To Silver Brass.**—We know of no *cheap* method for silvering brass; at least there is no other substance but silver or one of its salts which would give a coating of silver, although the quantity required is very small in proportion to the surface to be coated. The best and shortest method of cold silvering is the following: silver chloride, cream of tartar, alum, of each, one part—or, silver chloride, 1; cream of tartar, 6; and burnt alum, 1 part, are rubbed to a very fine powder, avoiding the contact of any metal, and a portion of the mixture applied to the article to be silvered, by means of a cork or a piece of chamois. Afterwards the surface is cleaned off and polished. To make brass articles *look* like silver, the best plan probably would be to electroplate them with German silver, an alloy of copper, 50; zinc, 25, and nickel, 25 parts; our space, however, does not permit us to give full directions here; we shall have to refer you to *Napier's Manual of Electro-Metallurgy*, or *Guettier's Metallic Alloys* for further details.

No. 331.—**Angostura Bitters.**—Angostura Bark, 4 oz.; chamomile flowers, 1 oz.; cardamom seeds, ¼ oz.; cinnamon bark, ¼ oz.; orange peel, 1 oz.; raisins, 1 pound; proof spirit, 2½ gallons. Macerate for a month, press and filter.

No. 332.—**Cologne.**—The following formula is recommended by Dr. Askinson: oil of bergamot, 7 parts; oil of lemon, 17 parts; oil of neroli (pétale), 10 parts; oil of neroli, bigarade, 3.5 parts; oil of rosemary (Eperlé), 7 parts; deodorized alcohol (94 per cent), 2,460 parts; all by weight. The oils must be perfectly pure and fresh, and the mixture must be allowed to stand until it is fully "ripe." One-eighth of it is then taken out, enough distilled water is added to the larger portion to just produce cloudiness, and then the reserved portion added, which will restore the transparency. If it requires filtering, this should be done by means of magnesia or French chalk. Age improves the flavor.

No. 333.—**Saturated Solution of Carbolic Acid.**—Carbolic acid or phenol requires for solution 20 parts by weight of water, that is, 1 part of carbolic acid is soluble in 20 parts of water, and such a solution is saturated.

No. 334.—**Salicylic Acid.**—This is made by neutralizing a strong solution of caustic soda with phenol (carbolic acid), evaporating to dryness, transferring the dry mass to a retort placed in an oil bath, and when the temperature has reached 100°C., passing carbonic acid gas through the contents. During the ensuing rise of temperature, a good deal of phenol distils over; as soon as this ceases, and the temperature has reached 250° C., the retort contains nothing but impure sodium salicylate. This is dissolved in water and decomposed by hydrochloric acid. Finally the acid is purified by recrystallization, and finally by sublimation. It would not pay to make this, except on a very large scale, and with special apparatus. Besides, the process is patented.

No. 335.—**Iodide of Arsenic in Struma.**—One of our subscribers would like to know what may have been the experience of any physician who has administered iodide of arsenic in "Scrofula, complicated with necrosis."

No. 339.—**Thymol.**—When oil of thyme (*Thymus vulgaris* L.) is subjected to fractional distillation, it is resolved into two portions: the first, more volatile and boiling between 178° and 180° C., is a mixture of two hydrocarbons, *cymene* $C_{10}H_{14}$, and *thymene* $C_{10}H_{16}$. The second is *thymol* (sometimes incorrectly called thymic acid). This is a solid crystalline substance, having an odor resembling that of the oil. It boils at 230° C., is soluble in 330 parts of water, and very readily soluble in alcohol, ether, and glacial acetic acid. More information will be found elsewhere in this number.

No. 341.—**Grindelia robusta; Tinctura and Elixir.**—The following formulæ are furnished to us by one of our friends in New York. *Tincture:* Macerate one part of the carefully picked leaves and tops of Grindelia robusta with ten parts of a mixture of 2 volumes of alcohol and 1 vol. of water for 12 days. Then express strongly, and filter the expressed liquid. *Elixir:* Tincture of Grindelia, 8 fl.oz.; alcohol, 4 fl.oz.; glycerin, 4 fl.oz.; oil of orange, 8 min.; oil of Ceylon cinnamon, 1 min.; dissolve

the oils in the alcohol, mix this with the glycerin, and add the tincture. The best preparation appears to be the fluid extract.

No. 348.—**Berberis Aquifolium.**—This is a species of Berberis, growing in the Northwestern United States, from Oregon southwards. It is an under-shrub, 2 to 5 feet high, branching, the branches often procumbent. Leaflets are coriaceous, obscurely reticulate on both sides, the veins all rising from the midrib, ovate-lanceolate, or elliptical-oblong, and slightly cordate at base, the margin repand with thorny or spinose cuspidate teeth. The flowers are in almost erect clusters of short racemes. The fruit is a dark purple berry. It is sometimes called ash berbery, or holly-leaved berberry. It had formerly been separated from the genus Berberis, and drawn to Mahonia (Nuttall); but Bentham and Hooker have reunited the two genera. We do not know that any part of the plant has been used medicinally, or whether it can be had in the market. You might apply to Cheney, Myrick, Hobbs & Co., of Boston.

No. 353.—**Eau de Botot.**—This is a liquid much used for cleansing the teeth and perfuming the breath. It is made after the following formula: anise, 30; cloves, 8; canella, 3; essence of peppermint, 1.2; brandy, 875 parts (by weight); macerate 8 days; filter and add: tincture of ambergris (1:10), 4 parts. Sometimes 2 parts of cochineal, and 15 parts of red cinchona are added to the substances to be macerated.

Nos. 354, 355.—**Liquid Lactopeptine.**—The manufacturers of this article state that Lactopeptine is made after the following formula:

Pepsin	8 oz.
Pancreatin	6 oz.
Ptyalin or diastase	4 drachms.
Lactic acid	5 fl. "
Hydrochloric acid	5 fl. "
Sugar of milk	40 oz.

Liquid lactopeptine is directed to be prepared by dissolving 300 grs. of the lactopeptine powder in 5 fl.oz. of distilled water, and adding 3 fl.oz. of glycerin. Dose, 1–2 teaspoonfuls.

Elixir of Lactopeptine—This may be made as follows: Lactopeptine, 256 grs.; distilled water, 1 fl.oz.; simple elixir, 15 fl.oz. The formula of the latter you will find in our last volume, p. 62.

No. 356.—**Liquor Carbonis Detergens.**—The following is said to be the formula: Soap-bark (Quillaya Saponaria), bruised, 4 pounds; alcohol, 65 per cent, 2 gallons; heat to boiling; macerate for several days, and filter. Then take of this tincture 100 parts; add to it 50 parts of coal-tar; digest the mixture for 8 days at a moderate temperature, occasionally stirring, and filter. Whether this is the preparation alluded to in *The Lancet*, 1878, p. 113, we cannot say.

No. 357.—**Peroxide of Hydrogen Solution.**—This may be prepared after one of the following formulæ:

1. Rub together 1 part of caustic baryta and 4 parts of potassium chlorate to a fine powder; then introduce the mass in small portions into a Hessian crucible heated to redness, and melt them together. Pour out on a slab; let cool; reduce the mass to a fine powder; exhaust it with water, and dry in a moderately warm place. Small portions of this powder, which contains about 50–65 per cent of barium peroxide, are introduced from time to time into cold water, through which a stream of carbonic acid gas is passing. Filter off the separated barium carbonate, and concentrate the solution, if desired, by means of an air-pump, or by exposing it over sulphuric acid. Keep it in well-stoppered bottles.

2. 10 parts of caustic baryta and 5 parts of potassium chlorate are powdered, mixed, fused together, and the fused mass powdered, washed with water, and dried. 10 parts of the dried powder are mixed with 50 parts of solution of phosphoric acid (spec. grav. 1120) in a vessel standing in a *freezing* mixture. The mixture is allowed to stand for 24 hours, until the precipitate has subsided; the clear liquid is poured off, and, if necessary, filtered through powdered glass.

3. Zinc-amalgam (thin filings or shreds of zinc covered with mercury) is introduced into a rather large strong bottle, and about double its bulk of distilled water poured over it. Having closed the bottle with a glass stopper, it is briskly shaken for a few minutes. The liquid is then poured off and preserved.

4. That which is known as **Golden Hair Wash or Oreoline** is said to be prepared as follows: 10 parts of barium peroxide, prepared as directed above, are placed into a vessel together with pieces of ice and a little distilled water, and 45 parts of solution of phosphoric acid (spec. grav. 1,130), previously diluted with 60 parts of distilled water, are added, taking care *not* to allow the mixture to become *warm*. The vessel is stoppered, set aside for a few days in a cold place; the liquid then poured off, and filtered through sand, which had previously been washed with muriatic acid and water. It must be kept in a cool place in glass-stoppered bottles.

No. 358.—**Deodorized Opium.**—Opium in fine powder is packed into a percolator and exhausted with ether. This takes out the narcotina and the odorous principle, which is often the cause of patients getting sick at the stomach. The powder is then removed from the percolator and dried. Whether the firm you speak of use this method or not, we do not know.

No. 359.—**Manufacture of Ice.**—We can refer you to the columns of the *Scientific American* and its *Supplement* for 1876 and 1877 for several improved processes and machinery for making ice. At present we have no space for a detailed description.

No. 360.—**Liquid Polish for Silver.**—You may immerse the silver articles for about 10 minutes into water of ammonia; then wash thoroughly in water, and wipe with a soft towel.—Or pour a little sulphuric acid into a saucer, and apply it by means of a linen rag quickly to the silver, rubbing it on without getting it on your fingers; afterwards cover the article with precipitated chalk, mixed with alcohol, and let remain until dry. Then remove the coating; wipe the surface, and polish it with chamois.

Correspondents desire answers to the following inquiries. Can any of the readers of NEW REMEDIES reply?

351.—What is the composition of "Excise Tonic" made by some one in New York?

342.—What are the ingredients of "Tamar Indien?

344.—What is the composition of "Simmon's Liver Regulator?"

345.—What is the composition of "Clark's Antibilious Compound?"

343.—What is the composition of "Lallemand's Gout Specific?"

NOVELTIES.

PERSONS *having* NEW *inventions, processes, and novelties which they may wish to bring to the notice of readers of* NEW REMEDIES, *can do so through this column by forwarding (when it is possible to do so) a sample to the* EDITOR, *accompanied with a suitable illustration, when one is needed to give an adequate idea of the thing described. If it is desired, cuts will be made at the expense of the person furnishing the sample.*

It will be understood that such notices are to be gratuitous; based solely on the merits of the articles submitted, and published as matters of general interest to the readers of the Journal.

All samples and communications must be received before the fifth of the month.

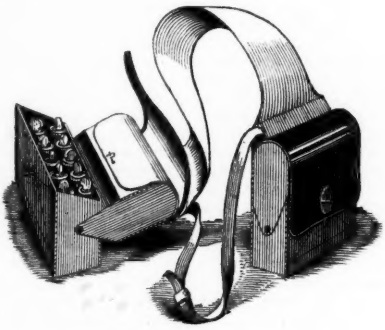
Stewart's Cod-Liver Oil, Catawba Wine, and Dialyzed Iron.

MR. F. E. STEWART, of 54 Barclay St., New York, has sent for our inspection an emulsion of cod-liver oil with aca-

cia, which is stated to contain 50 per cent of the finest grades of Norwegian oil, ten drops of dialyzed iron, one drachm of Catawba wine, and aromatics to disguise the taste of the oil, in each tablespoonful. The emulsion is nicely made, and its flavor is by no means disagreeable. The combination is a very useful one, and it would be difficult to present it in any better form than in the one under consideration.

Barnes' Duplex Corkscrew.

IT has long ceased to be thought necessary to make separate holes of different dimensions for the passage of cats and kittens through cellar doors, but until now, a corkscrew suited for a wine bottle or demijohn would hardly be thought appropriate to draw the cork of a medicine vial. Somebody named "Barnes" has revolutionized all this, judging by a three-cornered envelope and a corkscrew which have reached us, but which furnishes us no further information. If Mr. (or Miss, or Mrs.) Barnes or whoever sent us the sample will also send a cut to illustrate this novelty and tell how, where, and for how much such corkscrews can be bought, we have no doubt that these items will interest many of our readers, and be productive of enormous wealth to the manufacturer.



Hoff's New Saddle Bag.

H. HOFF & BROTHER, of 167 William St, have a new saddle bag, presenting the following advantages: 1. It has a neat clasp instead of the old-fashioned buckle and strap—a much more convenient arrangement. 2. It has no drawers nor trays to be pulled out, but the moment the clasp is unfastened, and the bag is set upon a table or other support, the weight of the top-box causes the latter to fall to the rear and rest on the table. 3. The bag is closed by being raised by the middle part so as to hang free.

Twitchell's Tooth Powder Box.

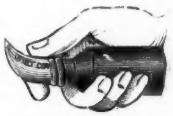
ALTHOUGH patented on the Centennial Fourth of July, this will be to most people a novelty; but if they long allow it to remain so, they will miss seeing a very compact and handy arrangement for using tooth powder, and avoiding the caking which comes from dipping into their boxes with wet brushes. The feature consists in the placing of a little shelf, a short distance within the opening into the box on to which enough powder can be shaken to charge the brush, while the balance is protected from moisture. The adjoining cut will explain the arrangement of the shelf and the general form of the box. It ought to become especially popular with travellers. They sell for $12.00 and $16.50 per gross, according as they contain 1 oz. or 2 ozs., and are to be had of Oscar Twitchell, 1,179 Broadway, New York.

Allan's Fly-Brick.

J. C. ALLAN & CO., of Buffalo, are offering a new fly-exterminator in the form of a brick, about an inch in thickness and in breadth, and an inch and three-quarters long. We have had no occasion to try its power yet, but the circular which accompanies the sample sent to us, promises a wholesale destruction of flies in the most expeditious manner. One brick, of a retail value of 10 cts., is guaranteed to kill all the flies in a room in two hours, and to last through the season. Such an efficient means as this is claimed to be of ridding houses and stores of these summer pests would certainly be a blessing cheaply purchased at such a price. One hundred bricks are furnished in an ornamental case for $5.00, and each one is inclosed in a little pasteboard box, with directions for use printed on the sides.

Dickinson's Insect Gun.

THE Society for Prevention of Cruelty to Animals has overlooked roaches, croton bugs, and other species of domestic small game, and the average housewife finds no law to prevent her gunning for them at any season of the year. Just now, with moving and cleaning, the demand for ammunition and weapons is likely to be most lively, and those who lay in a supply should consider the merits of this gun. Dickinson's patent is essentially a "breech-loader," and consists of an india-rubber nipple fitting the neck of any small bottle. Being squeezed, it forces the charge out of the small opening at the point. $8.00 per gross. Address C. B. Dickinson, 349 Adams St., Brooklyn.



Lacto-Pepticum.

When Jael smote a nail through the temple of Sisera, the captain of Jabin's army, she first "opened a bottle of milk, and gave him drink." (Judges iv. 19.) There is little doubt that the "bottle" referred to was the skin of some animal, and that the "milk" was a congener of the Tartar Kumys. It was the soporific effect of the alcohol contained in the fermented milk that helped Jael to deliver Israel from its enemy.

Kumys can, therefore, hardly be claimed to be a novelty, although modifications of the process of manufacture, whereby its component parts are varied, are proposed from time to time. Among the more recent of these is that of Mr. E. A. Du Puy, of 320 Van Brunt St., South Brooklyn, who has given the name of Lacto-pepticum to his wares, as a distinctive title. There are numerous indorsers of the efficacy of Mr. Du Puy's preparation, and the sample which we have tried is agreeable in flavor, and by the fineness with which the casein has become divided appears to be carefully made. Whether as a beverage or as a therapeutic agent, fermented milk has not yet received in this country the attention its merits deserve, and we commend Mr. Du Puy's preparation to those who wish to make a trial of it.

Syrup of Coffee.—Two troy ounces of coarsely ground roasted coffee are exhausted in a percolator with water, so as to obtain 16 fluidounces of liquid. This is poured gradually upon 28 troy ounces of sugar contained in a funnel, the orifice of which is loosely stopped with a bit of sponge. The funnel is to be kept covered until the sugar is nearly dissolved. The cover is then removed, and the solution allowed to drain through the sponge. This syrup is an admirable vehicle for disagreeable medicines.

PRESCRIPTIONS AND FORMULÆ.

Formulæ of Secret Medicines.

(*Continued from page 90.*)

Royer's Beard-cultivating Pomade (Royer & Co., Berlin).—An ointment of one part pulv. cinchon. rub., and 1½ parts of a hair pomade containing wax.—*Hager.*

Beard-cultivating Tincture (Bergmann, Rochlitz).—A spirituous extract of some agreeable bark, mixed with a little oil of rosemary and thyme.—*Wittstein.*

Royer's Beard-cultivating Tincture (Royer, Berlin).—10 grammes common salt, 150 grammes French brandy, fictitious and fuselly, and 2 grammes tincture of mace.—*Schädler.*

American Beard Tincture (Teinture américaine pour la barbe), for dyeing the beard black. Three fluids. No. 1, nitrate of silver solution; No. 2, tincture of galls; No. 3, sodium sulphide solution.

Bay Rum.—One of the highly valued American head-washes, pleasant in use, cooling and cleansing, and promoting the growth of the hair. It is prepared by distilling rum from the leaves of *Myrcia acris* (called "Bayberry" in America).

Dr. Beach's Specific against Hemorrhoids and Stomach Complaints of all kinds.—A tin box containing about 160 grammes of a fine sulphur-yellow powder, and imbedded in it a vial with 40 grammes of a brown clear fluid. The powder is a mixture of 7 parts of washed flowers of sulphur, 2½ parts cream tartar, ⅛ part of an inferior kind of rhubarb, finely powdered. The drops consist of a solution of brown sugar in strong spirit, with traces of various ethers.—*Hager.*

Benedictine's Healing-Plaster (Hauber).—35 grammes of a dark-brown plaster, prepared by digesting together 1 part litharge with 2 parts olive oil until they become blackish brown, then adding 4 parts yellow wax, continuing the heat for a short time, and then pouring out.—*Wittstein.*

Berenizon (Dr. Charles Wortley).—A preparation for promoting the growth of the hair. Balsam of Peru 3 grammes, castor oil 3 grammes, tinct. cinchona 4 grammes, spirit 85 grammes, rosewater 40 grammes.—*Schädler.*

Bergbalsam—Mountain Balsam (of G. Schmidt, Berlin).—Recommended for hemorrhoids, want of appetite, headache, constipation, etc. Rhubarb 2 parts, cortex frangulæ 10 parts, milfoil flowers (*Achillea millefolium*) 1 part, tansy 1 part, crystallized soda 1½ parts; are digested for some hours in warm water, the fluid expressed made up to 26 parts, 30 parts of sugar dissolved in it, and lastly mixed with 17 parts of rectified spirit.—*Hager.*

Bettnässen, Remedy for Incontinence of Urine (prepared by Dr. Kirchhoffer, in Kappel near St. Galle).—Thirty powders, each consisting of 2 grammes ferri carbonas, 4 grammes ergotæ pulv., .03 grammes extract. nuc. vom. aquos. The prescription for the embrocation runs—Spirit serpylli 120 grammes, tinct. nuc. vom. 60 grammes, liq. ammon. 15 grammes.—*Hager.*

Bickel'scher Thee, for constipation, flatulence, hemorrhoids, loss of appetite, stomach complaints, and similar diseases. Cassia lignea and anise, of each 3 parts; cumin and fennel seed, each 4 parts; senna leaves, 20 parts; to be bruised together.—*Selle and Hager.*

Bielefelder Tropfen — Bielefeld Drops (Bansi).—A spirituous extract of wormwood, unripe oranges, rhubarb, cascarilla, cloves, and gentian.—*Hager.*

Birkenbalsam—Birch Balsam (Dr. Friedrich Lengiel).—A cosmetic against wrinkles, small-pock marks, freckles, mole spots, red noses, acne, etc. 5 grammes water glass, 2 grammes potash, 1 gramme soap, 5 grammes gum arabic, 10 grammes glycerin, 400 grammes water.—*Schädler.*

Biscuits depuratifs (Olivier) are made with meal, milk, and sugar. Each biscuit contains 1 centigramme corrosive sublimate.—*Foy.*

Biscuits purgatifs (Caroz).—Each biscuit contains 2 decigrammes scammony.—*Reveil.*

Biscuits purgatifs (Sulot).—Each biscuit contains 6 decigrammes scammony.

Biscuits purgatifs et vermifuges (Ferd. Gräf, Aschbach) contains ¼ gramme resina scammonii in each.

Biscuits purgatifs et vermifuges au calomel (Sulot).—There are 3 decigrammes of calomel in each.—*Reveil.*

Biscuits vermifuges à la Santonine (Sulot).—Each biscuit contains 5 centigrammes of santonin.—*Reveil.*

Bismuth Powder, for beautifying the skin and removing freckles. (From North America.) Consists of calcium carbonate, with much clay, and is free from injurious metals.—*Chandler.*

Blanc de Perles.—A cosmetic wash, consisting of a perfumed mixture of spirit and water, with a thick white deposit of calomel and carbonate of lead.

D'Albespyre's Blistering Tissue.—Lard and ship's pitch of each, 1 part; resina flav. and yellow wax, of each, 4 parts; finely powdered cantharides, 6 parts; melted together, and spread over taffety.

Blatticide, or Moth-killer (Macks).—3 parts camphor, 1 part each oil of lavender, oil of spike, oil of turpentine, 2 parts benzine, 32 parts spirit.—*Hager.*

Electuary for Chlorosis—Female Electuary.—A greenish-black thick syrup, consisting of sugar, bayberries, carbonate of iron, iron filings, and water.—*Buchner.*

Chlorosis Powder—Female Powder (Fräulein M. A. Gerzabeck; patented by Saxon Government).—Consists of a mixture of anise, sugar, and 14 per cent of iron filings.—*Wittstein.*

Chlorosis Powder—Female Powder (Krüsi-Altherr, Gais, Canton Appenzell), according to Schott and Strauss, is a mixture of violet root, gum arabic, and a tasteless green powder, with 33 per cent of steel filings. ½ ounce, 4*s.* According to Hager, it is composed of two parts ferri pulvis, with 3 parts powdered sweet-flag root.

Chlorosis Powder—Female Powders (Kruse).—Steel filings, starch powder, and knot grass, of each 1 part. Florentine orris root, 4 parts.

Chlorosis Powder—Female Powders (Thrusi).—A mixture of 1 part steel filings and 2 parts of a vegetable powder composed of gum arabic, Florentine orris, knot grass, etc.—*Egb. Hoyer.*

Chlorosis Water (Dr. Ewich) contains in 10,000 parts 11 of sodium carbonate, 9 of sodium chloride, 1½ sodium sulphate, 7 calcium carbonate, and 1.2 iron carbonate with an excess of carbonic acid.—*Hager.*

Bloom of Youth, or Liquid Pearl (G. W. Laird, New York).—A colorless liquid holding in suspension 34 per cent of zinc oxide entirely free from lead.—*Chandler.*

Blüthenharz—Flower Resin (Kwizda, Kornenburg).—Against barrenness in domestic animals. A mixture of 9 parts powdered Burgundy pitch with 1 part pine pollen, ¾ ounce.—*Hager.*

Flower Dew (F. J. Weber, successor of Rau, Bamberg).—A flat bottle with the name of Rau moulded on it; its gross weight is more than 80 grammes, but it contains scarcely 22 grammes of a nearly colorless but slightly yellow fluid, consisting of a pleasant aromatic solution of oils of bergamot, lemon, orange flowers, and rose in strong spirit.

"*Blutandrang und Luftröhren-Verschleimung* (Remedy for congestion and obstruction of the air-vessels), manufactured and sold by the inventor, C. Tänzer, 18 Kesselstrasse, Berlin," is the title of a twelve-page pamphlet, which offers a fluid of 2*s.*, and an apparatus for 6*d.* For cold in the head, the apparatus, which consists of a small linen cushion to bind over the mouth, is moistened with 10 to 15 drops of the fluid. The fluid (150 grammes) is a mixture of spirit of wine, and acetic ether, in which some arnica, milfoil, etc., have been macerated.—*Hager.*

Gout and Rheumatic Blood-purifying Tea (Franz Wilhelm, Neunkirchen).—Equal parts of senna leaves, sarsaparilla root, licorice, rad. tritici, red sandalwood, bittersweet stalks, cut small and mixed. A cylindrical yellow packet, containing 250 grammes of tea in eight parcels.—*Hager.*

Blood-purifying Tea (F. Köller, Graz).—Senna leaves, 32 parts; guaiacum wood, 10 parts; juniper wood, rest-harrow root, rad. tritici, dandelion root, chicory root, of each 8 parts; alder bark, 3 parts; sassafras, 2 parts; staranise, 5 parts, dirty and worm-eaten, roughly chopped, and mixed.—*Hager.*

Bockbieressenz, for the artificial imitation of bock bier.—A tincture of 1 part lupulin, 2 parts pyroligneous acid, and 8 parts spirit of wine.—*Hager.*

Bonbons vermifuges de Garoz.—A bonbon containing 15 centigrammes of scammony, and 2 centigrammes of santonin.—*Reveil.*

Boonekamp of Maagbitter.—Dried orange berries, 100 grammes; bitter orange peel, 30 grammes; gentian root, 60 grammes; cascarilla bark, 30 grammes; turmeric, 15 grammes; cinnamon, 25 grammes; cloves, 15 grammes; rhubarb, 7½ grammes; 90 per cent spirit, 750 grammes; water, 1,650 grammes; staranise oil, 40 drops; sugar, 250 grammes; digested, expressed, and filtered.—*Hager.*

Bräunetinctur—Quinsy or Brown Tincture (Netsch, Rauschau), an embrocation for the larynx, is a mixture of 3 parts oil of cloves and 1 part creosote.—*Hager.* According to Leimbach, 1 part creosote with 3 parts of a spirituous tincture of cochineal perfumed with oil of cloves.

Bramaelixir—Genuine Asiatic Stomach Bitter (Ch. Rama Ayen, Hamburg).—Cardamoms, cinnamon, cloves, of each 15 grammes; galangal, ginger, zedoary, pepper, of each 30 grammes; wormwood oil, 15 drops; 90 per cent spirit, 830 grammes; water, 330 grammes; digest and filter.—*Hager.*

Brandish's Alkaline (Liqueur de potasse des Anglais, Solutio Alkalina Anglica), used in England to add to meat and vegetables about to be cooked, to help in "drawing" tea and coffee, and as a medicine to neutralize acidity of the stomach and lubricate the digestive passages [die Verdauungswege schlüpfriger zu machen]. Preparation:—Crude carbonate of potash 3 parts, wood ashes 1 part, quicklime 1 part, warm water 40 parts. Add to the water the lime, carbonate, and ashes, digest one day, and filter.—*Hager.*

Brandreth's Pills, much used as a purging pill in North America, consist of gamboge, podophyllin, the inspissated juice of pokeberries, saffron adulterated with turmeric, powdered cloves, and peppermint oil. Gamboge is stated to be present in Brandreth's pills on the authority of two American druggists and one dealer. The action of the pills does not, however, correspond with that ingredient, for in two persons five pills produced no loose stools.—*Hager.*

(*Continued from the Chemist and Druggist.*)

Variable Strength of Dialyzed Iron Solutions.—Mr. Henry Trimble finds upon the analysis of six samples of dialyzed iron made by Philadelphia manufacturers that only one approximates to the advertised strength, viz.: 5 per cent of the oxychloride—the scale ascending from 2.514 to 4.831 per cent.

Unguentum Myristicæ Opiatum.—

℞. Powd. opium.....1 part.
Distilled water.....1 part.

Rub well together, and mix well with a previously warmed mixture of

Oil of nutmeg (fixed).....50 parts.
Lard.....50 "
Oil of mace.....2 "

Blaud's Pills.—A correspondent of the *Pharm. Zeit.* gives the following formula: Sulphate of iron exsiccated, 154 grains; potassium carb., 230 grains; powd. althæa root, 30 grains; honey, q. s. Make into 120 pills. The potassium carbonate having been rubbed in a mortar, the other powders are successively added. The honey must be added cautiously, as one or two drops in excess make the mass too damp, and necessitate an increased size of the pills, by the addition of more powd. althæa.

Imitation Ivory.—This compound is of recent invention, and is prepared by intimately mixing calcined magnesia with caoutchouc, by the aid of heat. The mass having been subjected to a strong pressure, it assumes the density of ivory, and is said to be so firm and elastic that billiard-balls made from it do not break, even when dropped from a height of 60 feet.

Fumigatory Powder and Paper.—

Bisulphate of potassium.....5 parts.
Nitrate of potassium.....4 "
Peroxide of manganese...q.s. to blacken the mixture.

Pulverize separately and mix carefully. When fumigation is required, throw a few grammes on a red-hot shovel. An agreeable odor may be afterwards produced by burning paper as follows:—One part of nitrate of potassium and two of sugar are dissolved in six parts of water; paper which has not been sized is then plunged in this solution and dried.—*Boutigny.*

Tinctura (or Mistura or Solutio) Aloes Composita.

℞. Aloes Socotrinæ.....ʒ i.
Sodii bicarbonatis.....ʒ iss.
Glycerinæ,
Tr. Lavand. co.....ää fl. ʒ ij.
Ol. Menthæ piper.....ɱ xxv.
Aquæ.....O i.

—(*Proc. Kings Co. Med. Soc.*)

Liquor Hydrargyri et Sodii Chloridi.—

Dr. Emil Stern, of Breslau, recommends for hypodermic use the following solutions, which are said to be free from the otherwise objectionable consequences of subcutaneous mercuric injections:

I. *Mild Solution:*

℞ Hydrarg. chlor. corros.....0.20 grammes.
Sodii chloridi puri.....2.00 "
Aquæ destillatæ.....50.00 "

II. *Stronger Solution:*

℞ Hydrargyri chlor. corr.....0.25 grammes.
Sodii chloridi puri.....2.50 "
Aquæ destillatæ.....50.00 "

A single injection of these two liquids would be from 2.0 to 2.6 grammes (30 to 40 grains.)

Collodion Saturninum.—

10 parts of finely rasped soap-plaster are exhausted with 50 parts of ether, the solution filtered, the filter washed with ether until the filtrate amounts to 50 parts, and the latter is then mixed with an equal bulk of collodion of double the usual strength. The resulting solution is somewhat turbid, but does not contract on drying, and forms a tough elastic coat.

Hair-Restorative.—

Prof. Erasmus Wilson recommends the following lotion:

Liquor ammoniæ,
Ol. amygdal. dulc.,
Chlorofomi.....ää 1 fl.oz.
Spiritus rosmarini.....5 fl.oz.
Ol. Limonis.....gtt. x.

The scalp is to be well cleansed with a stiff brush before applying the lotion, which should be diluted if it should be found too strong.

Anti-asthmatic Cigarettes.—

Belladonna leaves.....5 grammes.
Stramonium " .....5 "
Digitalis " .....5 "
Sage " .....5 "

are extracted with

Hot water.....1,000 "

to the filtered liquid are added

Potassium nitrate.....75 "
Tinct. benzoini.....40 "

Into this liquid thin sheets of blotting paper are immersed one after another, where they are left for 24 hours, after which they are dried, and cut up into sheets of 10×7 cm. (4×2¾ inch.), which are made into cigarettes.

Unchangeable Mucilage.—According to A. Vogel, a durable and unalterable mucilage may be prepared by precipitating a solution of gum arabic with ordinary al co-

hol in excess, pressing the precipitate, drying it, and redissolving it in water.

To make Starch-Paste or Mucilage adhesive on Tinned Iron.—The addition of ammonia, or of a little glycerin, or of a little tartaric acid has been heretofore recommended. A few years ago, aluminium sulphate (not alum) was proposed, which we have since used ourselves with great success. Much better, however, is said to be the addition of about 20 drops of antimonious chloride (butter of antimony) to 8 oz. of the paste.

Imitation Mother-of-Pearl.—An artificial coating of mother-of-pearl may be applied to glass or other articles, according to *Ackermann's Gewerbezeitung*, by first applying a thin coating of gelatin, then a concentrated solution of magnesium or zinc sulphate, and drying. Upon this is poured the so-called "pearl-essence," being the well-washed fine silvery scales removed from the bellies of white-fish held in suspension by water. When this is dry, the whole is covered with a fresh, thin layer of gelatin.

Emplastrum Picis Liquidæ.—

Tar	2 parts.
Resin	2 "
Pitch	1 part.

Melt the resin and pitch together, remove from the fire, add the tar and stir rapidly. Spread on chamois or cloth, when it cools to the consistence of honey. Two-fifths of this is the remedial agent; it is adhesive and elegant. (Dr. F. Marion Murray in *Am. Journ. Pharm.*)

Empasma (Dusting Powder) for Chafing and Eczema of Vulva.—

Calomel	ʒ ss.
Calamine	ʒ iss. M.

Apply several times daily.

Application in Chilblains.—

Collodion	ʒ vi.
Tr. Ferri Chlor	ʒ ij.
Ol. Ricini	gtt v. M.

Paint with camel's hair pencil two or three times a day. Said to be very effective, if applied in the earlier stages.

Syrup of Butyl-chloral (Croton-chloral).—

Butyl chloral	2 grammes.
Glycerin (warm)	6 "
Extract of licorice	4 "
Distilled water	43 "
Syrup	45 "

Contains 2 per cent of butyl-chloral.

Goelis' Antilumbricoid Powders (Worm Powders).—

Valerian root, powd	2 parts.
Levant Wormseed	2 "
Calomel	1 "
Sugar	4 "

Divide into powders, each of 15 grains. Two to be taken every second day.

Corlieu's Anti-Gout Pills.—

Sodium silicate	2.50 gm.
Extract of Colchicum (hydro-alcohol.)	1.50 "
" " aconite "	3.00 "
Sodium benzoate	5.00 "
Soap, powdered	5.00 "

Make into 100 pills. Dose 1–5 per day.

Varnish.—

Shellac	3 ounces.
Acetate of lead	½ ounce.
Alcohol	16 ounces.

The filtered solution is said to give a fine, rapidly drying, and hard varnish.

Glacialin is the name of a preparation recommended for preserving meat, eggs, etc. It is composed of a solution of boric acid 9 oz., sodium biborate 4½ oz., glycerin 4½ oz., and sugar 3 oz. in 16 pounds of water.

ITEMS.

College of Pharmacy of the City of New York.—At the annual meeting of the College, held on March 21st, the following officers were elected to serve for the ensuing year: *President*, Ewen McIntyre; *Vice-Presidents*, H. J. Menninger, Wm. M. Olliffe, G. C. Close; *Treasurer*: Theobald Frohwein; *Secretary*: Henry A. Cassebeer, Jr.; *Trustees*: Paul Balluff, Gust. Balser, David Hays, Fred. Hoffmann, Wm. Neergaard, M. L. M. Peixotto, Gust. Ramsperger, Charles Rice, Dan C. Robbins, Ad. Tscheppe, Aug. W. Weismann. At this meeting, and at the meeting of the Board of Trustees held on April 4th, the following committees were elected and appointed: *Committee on Revision of Pharmacopœia*: Charles Rice, Fred. Hoffmann, Ph.D., P. W. Bedford; *Property Committee*: Wm. M. Olliffe, D. C. Robbins, T. Frohwein, Wm. Neergaard, A. W. Weismann; *Library Committee*: Chas. Rice, Gust. Balser, Ad. Tscheppe; *Committee on Reference*: Wm. Neergaard, D. Hays, D. C. Robbins; *Lecture Committee*: Gust. Ramsperger, Fred. Hoffmann, M. L. M. Peixotto, Chas. Rice, A. W. Weismann; *Committee on By-Laws*: M. L. M. Peixotto, H. J. Menninger, Chas. Rice; *Committee on Legislation*: H. J. Menninger, M. L. M. Peixotto, D. C. Robbins; *Curators*: Ad. Tscheppe, Gust. Balser, Charles Rice; *Delegates to the American Pharm. Association*: Chas. Rice, Paul Balluff, P. W. Bedford, Fred. Hoffmann, H. J. Menninger.

At the Forty-eighth Annual Commencement of this College, which took place on the 19th of March, the following-named gentlemen (51) received a diploma, 19 candidates having failed to pass their examination. We give also the titles of their theses:—George P. Bagley, Catskill, N. Y., "Results of several Percolations, made with the object of finding the exact weights of several carefully prepared tinctures."—A. P. Baxter, Coldspring, N. Y., "An Examination of Granular Citrate of Magnesia."—A. C. Behrens, Germany, "Officinal Ginger."—H. L. F. Behrens, Germany, "Zinc and its Officinal Preparations."—P. B. Boles, Lynchburg, Va., "Borate of Sodium and its Uses."—C. W. Brunner, New York, "The officinal Labiates of the United States."—T. R. Burgtorf, Hagen, Germany, "The products of Apis Mellifica, their medicinal properties and uses, adulterations and tests."—S. E. Dougherty, Bordentown, N. Y., "Syrups by cold Percolation."—M. F. C. Drescher, Bavaria, Germany, "Iodine and Iodide of Potassium."—A. A. Edlich, New York, "Arsenic and its Officinal Preparations."—H. W. Evans, Crab Orchard, Ky., "Crab Orchard Salts."—Gerson Gans, New York, "Historic Pharmacy."—W. Glatzmayer, Brooklyn, N. Y., "Pills and Wafers."—G. D. Hays, New York, "The Morphia Value of Commercial Powdered Opium."—Theodore Heller, Vienna, Austria, "Oxide of Ethyl, 'Ether.'"—Daniel Huber, Jr., New York, "Antimony and its Principal Preparations.—George Inness, New York, "Hydrobromic Acid (HBr.)"—J. B. Jacobus, Cedar Grove, N. J. "Reading and Compounding of Prescriptions."—W. H. Keeler, Trenton, N. J., "Jalap; and the Percentage Strength of Commercial Samples."—L. Y. Ketchum, Clyde, N. Y., "Secundum Artem."—C. G. Koehler, Brooklyn, N. Y., "The Natural Order Compositæ.—J. B. Kunath, Dresden, Germany, "Senna."—Daniel Leibe, Newark, N. J., "Arsenic."—E. N. Liell, New York, "On the Principal Constituents of Digitalis Purpurea."—F. W. Luerssen, Bremen, Germany, "Iodine and its Preparations."—Silas McIver, Newnan, Georgia, "Dialyzed Iron."—Joseph McMahon, Brooklyn, N. Y., "Liq. Ferri Chloridi and Ung. Hydrarg. Nitr."—John Metzger, College Point, L. I., "The Atomic Theory."—R. C. Miot, Columbia, S. C., "Gelsemium Sempervirens."—Silas H. Moore, Powlet, Vermont, "Plant Life and its Relation to the Animal Kingdom."—A. J. More, Wayne Co., Pa., "Damiana. An investigation of the Commercial Variety."—William H. Müller.

Hamburg, Germany, "Volatile Oils; their Composition, Adulterations and Modes for Detecting them."—Charles Potberg, Orwigsburg, Pa., "Benzoinum."—C. E. Reynolds, Munroeville, Ohio, "Strychnos Nux Vomica."—Richard J. Reynolds, Waverly, N. J., "Elegant new Pharmaceutical preparations."—W. F. Riecker, New York, "Eucalyptus Globulus."—Edward Roth, New Rochelle, "Urine and some of its Constituents."—J. W. Schelpert, Atlanta, Ga., "Glycerin."—L. J. Schlesinger, Charlottsville, Va., "Sugar from Sugar Cane."—W. H. H. Schofield, Catskill, N. Y., "Iodine and Potassic Iodide."—George Schreyer, New York, "Starch."—W. A. Smith, Newark, N. J., "Digitalis Purpurea."—A. T. Snelling, Chesterfield, Va., "The Preparation of fluid Extract of Ipecacuanha and Emetia."—A. F. Stevenson, Brooklyn, N. Y., "Jalap and its Resin."—Louis Thurn, New York, "Iron and its officinal Preparations."—A. G. Uber, Chicago, Ill., "By-products of Gas-industries."—R. Vandenhenden, Brussels, Belgium, "Theory of Nitrification."—W. M. Walker, Utica, N. Y., "Pharmaceutical Advancement and the Public."—Paul Weber, Germany, "Observations from the Pharmaceutical Laboratory."—Louis F. Weismann, New York, "Humulus Lupulus and its Officinal Preparations."—John Wimmer, New York, "Detection and Isolation of Arsenic in Organic Matter."

The winners of the gold, silver, and bronze medals, offered by the Alumni Association of the College, were George D. Hays, Silas H. Moore, and Daniel Huber, Jr. And the seven graduates next best in rank were announced to be Louis Thurn, Charles Potberg, Edward N. Liell, Albert C. Behrens, Charles R. Reynolds, W. H. Schofield, and A. F. Stevenson.

Professor Rossiter W. Raymond delivered the address.

The Cincinnati College of Pharmacy held its annual commencement on Thursday evening, March 21st, and following a brief address by Mr. George Eger, the President of the College, degrees were conferred on the following-named gentlemen:—Henry Bertrams, Cincinnati; Alex. H. Colvard, Ill.; L. Dressel, Cincinnati; M. Gleick, Cincinnati; Frederick A. Grossmann, Cincinnati; Henry Heister, Cincinnati; N. G. Hildreth, Westwood, O.; Augustus J. Hofling, Cincinnati; John H. Koenig, Ky.; John F. Kutchbauch, Cincinnati; Chas. A. Mohr, Mobile, Ala.; Leo S. Schreck, Mexico.

Prof. John A. Murphy, M.D., delivered the address on behalf of the Board of Trustees. He drew a distinct line between the professions of pharmacy and medicine, and condemned the practice of selling medicines except on physicians' prescriptions. The two professions are distinct, and yet dependent upon each other, and it is to the interest of each to not go out of their sphere or intrench at all upon the lines of the other.

The address on behalf of the faculty was delivered by Prof. E. S. Wayne, M.D., Phar.D.

The prizes were then awarded as follows: For pharmacy, by Prof. Fennel, a pair of prescription scales, to Mr. N. G. Hildreth; for general proficiency, by the alumni, a gold medal, to Mr. Charles A. Mohr; for proficiency in botany and materia medica—Prof. Wayne's gold medal, to Charles A. Mohr; for chemistry, a complete set of blowpipes, by Prof. Judge, to Mr. Leo S. Schreck.

A life-size portrait in oil of Prof. Wayne was presented to the college by Mr. Augustus J. Hofling. The valedictory was delivered by Mr. F. A. Grossmann, at the conclusion of which he was presented by the alumni with a copy of Webster's Unabridged Dictionary.

After the conclusion of the commencement exercises a reception was held in the parlors of the Highland House, under the auspices of the Alumni Association of the college.

At the meeting on the previous day the alumni elected the following officers for the ensuing year:—

President, Lewis Heister; *Vice-Presidents*, Aug. J. Hofling, first; H. Wilfert, second; *Recording Secretary*, Theo. Bange; *Corresponding Secretary*, A. Witterstrome; *Treasurer*, R. N. Kurze; *Executive Board* (for one year), G. A. Fieber, M. Gleick, T. Pellens, C. M. Greeve; for two years, E. A. Schmidt, E. T. Harley; *Delegates to the Pharmaceutical Convention*, Joseph H. Feemster, C. P. Rendigs, Louis Schwab, R. N. Kurze, C. M. Greeve; alternates, G. A. Fieber, C. F. Keener, C. E. Ferris, W. Rendigs, A. W. Bain.

Georgia Pharmaceutical Association.—The third annual meeting of this body was held in Augusta, on the 9th inst.

Philadelphia College of Pharmacy.—A large number of persons assembled at the hall of the College of Pharmacy, on North Tenth Street, on the evening of the 12th of March, the occasion being the fourteenth annual reception to the graduating class by the Alumni Association of the college. Mr. R. V. Mattison, Ph.G., President of the Association, occupied the chair, and, in a few appropriate remarks, received the class of "'78," numbering ninety-nine members.

A gold medal was then awarded to Mr. David P. Miller, of Virginia, who had received the highest average of the course.

The annual address was delivered by Dr. A. W. Miller, Ph.G., of the class of 1862. The speaker advocated certain changes in the collegiate pharmaceutical studies. He thought a post graduate course should be established, and also a course of graded studies. He thought that, in addition to the final examination, there should be one for admission into each course.

Four certificates for special branches of chemistry, pharmacy, materia medica and pharmaceutical manipulation were then awarded to Charles E. Barton, of Ohio; Charles E. Button, of Missouri; Charles H. Gardner, of Pennsylvania, and Delbert E. Prall, of Michigan.

The presentation of the photographs of the members of the class of 1878 to the Alumni Association then took place.

The valedictory address was delivered by D. E. Prall, of Michigan.

A testimonial to the best student in the Junior class was awarded to David Costelo, of Indiana. Remarks were made by Prof. Remington, Maisch and others, and at a late hour the pleasant proceedings terminated.

Alumni Association of College of Pharmacy of the City of New York.—The annual meeting of Alumni Association of the New York College of Pharmacy was held Thursday evening, March 14th, in the University Building. The following are the officers which were chosen for the ensuing year. President, Starr H. Ambler; Vice-Presidents, B. F. McIntyre, J. L. A. Creuse, B. F. Hays; Treasurer, Theobald Frohwein; Secretary, H. L. Coit; Registrar, L. M. Royce.

Delegates to the 26th annual meeting of the Am. Pharm. Ass'n, at Atlanta, Ga., in September, 1878:—P. W. Bedford, Theo. Frohwein, Starr H. Ambler, B. F. Hays, E. Montanus. At ten o'clock, the members and invited guests proceeded to the Sinclair House, and gave a collation in honor of the graduating class of '78.

The retiring President, Mr. B. F. McIntyre, presided. Toasts were responded to by Dr. Menninger, Mr. Ambler, Prof. Froebel, Prof. Bedford, Dr. Hoffmann, Ewen McIntyre, and others. The assembly dispersed at about 12 o'clock.

H. L. COIT, *Secretary.*

The Philadelphia College of Pharmacy held its fifty-seventh annual commencement on the 15th of March, when the degree of Graduate in Pharmacy was conferred on ninety-nine candidates, and a valedictory was delivered by Prof. John M. Maisch.

Massachusetts College of Pharmacy.—At the annual meeting, held March 4th, 1878, the following-named gentlemen were elected officers for the ensuing year: President, Samuel A. D. Sheppard; Vice-Presidents, Thomas L. Jenks, M.D., William S. Folger; Recording Secretary, D. G. Wilkins; Corresponding Secretary, George F. H. Markoe; Treasurer, Charles I. Eaton; Auditor, James S. Melvin; Trustees, Benjamin F. Stacy, S. C. Tozzer, Charles P. Orne, Edward S. Kelley, I. B. Patten,

George H. Cowdin, Edgar L. Patch; Secretary of the Board of Trustees, Henry Canning. The College and the School of Pharmacy were reported to be in a very satisfactory condition.

German Chemical Society.—The growth of this society since its foundation has been astonishing. It was inaugurated in 1868, under the presidency of Prof. A. W. Hofmann, with 122 resident (Berlin), and 125 non-resident members; the annual increase of membership averaged 200, and now it has 1,827 members, among whom are 1,608 non-resident, but German members, and 542 foreign members. The funds of the society amount to 22,708 marks. The total number of original communications published during the past ten years amounts to 3,726, covering a space of 13,803 pages of the journal. Prof. A. Kekulé, of Bonn, has been elected president for the current year.

Elias Magnus Fries, Professor of Botany at the University of Upsala, born 15th of August, 1794, died only a few days after the 100th anniversary (Jan. 10th), of the death of his great predecessor Linnæus.

Hunyadi Laszlo.—The waters of a mineral spring of this name, found near the location of the well-known Hunyadi Janos, have been analyzed by Professor Ballo of Pesth, and would seem to even surpass the latter in saline ingredients. The chief constituents of the three most renowned waters of this locality are in 1,000 grammes:

	Hunyadi Laszlo	*Hunyadi Janos*	*Franz Joseph*
Magnesium sulphate	24.2	22.4	23.8
Sodium sulphate	22.8	17.9	21.9
Potassium sulphate	0.16	0.15	0.15
Calcium sulphate	1.6	1.5	1.5
Total salts	51.1	44.9	44.8

Prize-Essay of the Medical Faculty of the University of Dorpat. The subject for 1879 is the following: *Critical examination of the methods which are used for the separation and quantitative determination of the several cinchona alkaloids.* We hope that this important question will be satisfactorily and exhaustively answered.

The Illinois Medical Law.—A correspondent of the *Med. and Surg. Reporter* writes that the Illinois State Board of Health have done a work very satisfactory, not only to the profession, but to the public. The law is not perfect, but will be a stepping stone to something more. Over six hundred strong, non-qualified, have left the State. Every doctor in the State is reading up. Very few students are entering our offices. Western colleges, as a result of the law, have been filled with students. Surrounding States will pass similar laws, in self-defence.

The Consumption of Sugar, coffee, beer, tobacco, and brandy in Germany during the periods of 1866–1870 (5 years), and 1874–1875 (2 years), together with the value of these articles, amounted per head of population (42 millions) to:

	1866–1870.		1874–1875.	
	kilos.	dollars.	kilos.	dollars.
Sugar	4.69	0.53	7.00	0.80
Coffee	2.15	0.67	2.28	1.13
Tobacco	1.40	0.37	1.92	0.63
Beer (litres)	55.00	2.09	93.00	3.54
Brandy	6.50	0.43	9.00	0.60

Prohibition of Foreign Patent Medicines in Russia.—The Russian Government has promulgated an order specifying by name those foreign preparations or patent medicines which are allowed to be imported into Russia, and those which are prohibited from entering the country. We select from the two lists those which are better known to us:

Admitted: Blancard's syrup of iodide of iron, elixir of jaborandi, wine of coca, extract of coca, vaseline, Boudault's wine of pepsin, chloral perlé, Mathey-Caylus' copaiva, cubeb, and oil of santal capsules.

Prohibited: Asthmatic pastilles, syrupus ferri oxydati, Dr. Airy's sarsaparillian, Dr. Airy's pills, tincture of Sylphium Cyrenaicum, Dr. J. Collis Brown's chlorodyne, eau de melisse des Carmes, hematosine, pomade vaseline, vaseline cold cream, vaseline camphor ice, Labaigue's dialyzed iron, Bravais' dialyzed iron, Dr. Airy's pain-expeller, Boudault's pepsin (in powder), Levington's health-preserving pills, American pills, Norton's chamomile pills, Hogg's pepsin pills.

Besides: Unguentum hydrargyri, emplastrum matris, emplastrum saponatum, emplastrum gummosum, emplastrum cerussæ, emplastrum plumbi, e. cantharidum, e. adhæsivum, trochisci santonini.

The Diminution of Madder-Cultivation in France.—Since 1862, a great reduction has taken place in the amount of madder grown in France, owing to the discovery and manufacture of artificial alizarine. In 1862, 54 millions of kilos were *produced*, in 1874, only 17 millions of kilos. The *export* has diminished in still greater ratio. The value of exported madder amounted to 31 millions of francs in 1867, 19 millions in 1870, 12 millions in 1874, and only 4½ millions in 1876.

The Adulteration of food, drink, etc., is to be punished in Wurtemberg, according to a law recently passed in its legislature, by the official publication of the offending party.

Ore's Process for Preserving the Brain.—By the following process the brain retains its natural form, color and size: Immediately after opening the skull, remove all the membranes so as to leave the convolutions and anfractuosities completely bare. Then plunge the cerebrum and cerebellum into a vase containing pure alcohol at 90°; renew the alcohol every 4 or 5 days during two weeks. Then envelop the brain in fine linen, soaked in alcohol, and confine it with rubber bands; place it in an oven at a temperature of 45°–50° centig., and leave it for 16 hours; then, after removing the linen, cover it with several coats of caoutchouc varnish, taking care that every point shall be touched several times.—*Mouv. Medical*, Jan. 5th, 1878.

A New Source of Atropia.—A new source of atropia has been noted by Dr. J. Tweedy, of the Royal London Ophthalmic Hospital. The alkaloid was derived from an Australian plant—the *Duboisia myporoides*—of a tribe midway between the *Solanaceæ* and the *Scrofulariaceæ*, and the physiological properties were investigated by Dr. Sydney Ringer. The alkaloid would seem to be in all respects identical with atropia.—*Med. Press and Circ.*

How to Stain Wood.

MR. LEO, apothecary in Bensheim, Germany, communicates the following useful formulæ for staining wood in the *Pharmac. Centralhalle:*

Yellow:—Paint the wood with a hot concentrated solution of picric acid, dry and polish. Remember that this substance is poisonous.

Black, resembling ebony:—Paint the wood several times with a concentrated solution of logwood extract, then treat it with a solution of ferric acetate of 14° Baumé (spec. grav. 1,108) until the proper shade is produced.

Gray:—Apply a solution of 1 part of silver nitrate in 50 parts of distilled water, twice; then paint with hydrochloric acid, and lastly with ammonia. Dry in a shady place, oil and polish. The more dilute the silver solution, the lighter is the tint.

Walnut color:—A solution of 1 part of potassium permanganate in 30 parts of distilled water is applied twice; five minutes after each application, the wood is washed with water, finally dried, oiled and polished. The solution should be fresh.

Dark Walnut or Polisander color:—Like the former; but after the final washing a solution of ferric acetate is applied, which brings out the dark veins.

Mahogany color:—Prepare a tincture of 15 gm. alkanet root, and 30 gm. of dragon's blood with 500 gm. of alcohol of 95 per cent by maceration, and filtration after three or four days. First paint the wood with nitric acid, and after drying, apply the above tincture once or several times, according to the tint desired. Ferric acetate may also be used to imitate the wave-lines of the genuine wood.